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AIDS HELPLINE: 0800-0123-22 Prevention is the cure

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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATION AUTHORITY

No. 813**14 June 2002**

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Security

Registered by NSB 08, Law, Military Science and Security, publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address ***below and no later than 7 July 2002***. All correspondence should be marked **Standards Setting – SGB for Security** and addressed to

<p>The Director: Standards Setting and Development SAQA <i>Attention: Mr. D Mphuthing</i> Postnet Suite 248 Private Bag X06 Waterkloof 0145 or faxed to 012 – 482 0907</p>
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SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**TITLE:** National Certificate in Security Practices: General (NQF level 03)**LEVEL:** 3**CREDITS:** 135**FIELD:** Law, Military Science and Security**SUB-FIELD:** Safety in Society**ISSUE DATE:****REVIEW DATE:****Rationale for the qualification:**

This qualification reflects the workplace-based needs of the private security industry that are expressed by employers and employees, both now and for the future. This qualification provides the learner with accessibility to be employed within the private security industry and provides the flexibility to pursue a security career with a wide variety of options and articulation within the private security industry.

Purpose of the qualification:

This qualification will allow a learner in the Private Security Industry to obtain a nationally recognised qualification in Security Practices. This qualification will enable creative coordination of professional, feasible, up to date, secure and safe providing of security services. A qualifying learner will be able to demonstrate knowledge and understanding of general security practices that brings about a level of professionalism within the private security industry expected at national level.

A learner will contribute positively towards supporting the private security industry as a part of South Africa's safety in society sector.

A learner who has achieved this qualification will be capable of combining a range of self-organisation and life long skills with a working knowledge of South African private security issues, and integrating these within a context to produce a professional practice which adheres to the high quality standards as expected by the private security industry.

It will also contribute to the upliftment of persons involved in providing a security service and will set a standard for professionalism in the private security industry. The qualification will assist in changing perceptions of lack of expertise and consistency within the private security industry. This will also assist in improving relationships between members of the private security industry, law enforcement agencies and official institutions and the community at large. This qualification will provide for recognition of prior learning to allow for the recognition of existing and common knowledge and skills that will not only allow a learner to gain credits towards this qualification, but to progress to further learning.

The generic core unit standards provide credits that allow access to both vertically and horizontally articulated qualifications. This qualification will enhance the status, accountability and employability of the learner within the private security industry as well as contribute to the quality and growth within the industry.

Through the electives component of the qualification learners are able to demonstrate specific vocational skills. Qualifying learners are capable of using a series of learning, legal and specialised skills to protect and serve clients and members of communities in accordance with relevant legislation and the constitution of the Republic of South Africa.

This will, as previously stated, attract quality people and allow for the aspirations of people to be part of the private security industry.

A learner acquiring the qualification National Certificate in Security Practices: General, will have applied knowledge, skills and workplace experience to provide general security services within the required legal framework and in the service of maintaining a safe and secure society.

Access to the qualification:

Open access.

All persons meeting the minimum requirements as prescribed in the Private Security Industry Regulatory Authority (SIRA) Act 56 of 2001, that is, the requirements barring employment of people who have previous convictions of crimes that have dishonesty as their element and serious violence.

Learning assumed to be in place:

It is assumed that learners wishing to enter a programme leading to this qualification have literacy, numeracy and communication skills equivalent to NQF level 2.

Core & Specialised exit level outcomes:

Exit level outcome 01

Ensure asset protection through access and egress control

Associated assessment criteria:

- Hand over and take over of access\egress control site is effectively applied.
- Access\egress control site is effectively and safely operated and maintained.
- Knowledge and understanding of searching people, vehicles, goods and articles is applied.
- Operations at an access\egress control site are concluded.

Exit level outcome 02

Protect premises and assets under all conditions.

Associated assessment criteria:

- Duty at area of responsibility is prepared for.
- Potential and existing threats are observed , identified and monitored.
- Premises and assets are safeguarded by patrolling and static guarding.
- Operations for safeguarding of premises and assets are concluded.

Exit level outcome 03

Safe and secure escorting of valuables and suspects

Associated assessment criteria:

- Escorting requirements are identified.
- Escort assignment is prepared for.
- The readiness of suspect/valuables/persons to be escorted is ensured.
- The escort is undertaken.

Exit level outcome 04

Effect a lawful citizen's arrest.

Associated assessment criteria:

- Knowledge and understanding of relevant legislation required for effecting a lawful citizens arrest are applied.
- Apprehension is prepared for.
- The citizens arrest is performed
- The suspect is detained and handed over to authorities

Exit level outcome 05

Attend and give evidence in court.

Associated assessment criteria:

- The person is prepared for giving of evidence in court.
- The evidence is presented in court.
- The court verdict is recorded and feedback is provided.

Exit level outcome 06

Receive, report and react to customer complaints within a security environment

Associated assessment criteria:

- Positive customer relations are built and maintained.
- Customer inquiries and problems are reacted to.
- Customer and/or superior is communicated with to resolve problems.

Exit level outcome 07

Manage own performance and work as part of a security team.

Associated assessment criteria:

- Completion of own task is planned for.
- Quality of own performance is maintained.
- Back-up support is provided.
- Role within a security team is established.
- Team effectiveness is contributed to.

Exit level outcome 08

Care for the welfare of a service dog.

Associated assessment criteria:

- The basic needs of the service dog are catered for.
- Safety precautions are conducted with the service dog in order to prevent accidents.
- Service dogs are transported in a safe and secure manner.
- The condition of the service dog is inspected.

Exit level outcome 09

Handle a service dog to deter crime and for protection.

Associated assessment criteria:

- A trained service dog is prepared for guarding duties.
- The trained service dog is utilised for guarding duties.
- Post-guarding responsibilities with regards to the trained service dog are conducted.

Exit level outcome 10

Supervise service dogs in a kennel environment.

Associated assessment criteria:

- The daily routine maintenance on the kennels is executed.
- Records with regards to the maintenance of service dogs are completed.
- Proper maintenance of a service dog is ensured.

International comparability:

Benchmarking was done against the Australian standards appropriate for security and investigative services and showed a substantial degree of similarity.

International comparability could therefore be found to support this qualification.

Integrated assessment:

Integrated assessment at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across unit standards to achieve competence that is grounded and coherent in relation to the purpose of the qualification.

The applied competence (practical, foundational and reflective competencies) of this qualification will be achieved if a person is able to provide effective access/egress control, protect premises and assets, safely and securely escort valuables/suspects/persons, identify, handle and defuse security related conflict, effecting lawful citizen's arrests, attend and give evidence in court, receive, report and react to customers' complaints and manage his/her own performance and work as part of a security team. The application of these competencies must be safe for society, quality assured and comply with minimum legislation.

The identifying and solving of problems, team work, organising self, the using of applied science, the implications of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competency assessment methods and tools to determine the whole person development and integration of applied knowledge and skills.

Applicable assessment tools to establish the foundational, reflective and embedded knowledge to problem solving and application of the world as a set of related systems within the private security environment.

A broad range of task orientated and theoretical assessment tools may be used.

A detailed portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner.

Assessors and moderators (registered with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO) should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and experience.

Recognition of prior learning:

This competency may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non formal learning and assessment /coaching experience.

Articulation possibilities:

This qualification will allow a person to advance to learning for a National Certificate in Security Practices: Specialist at NQF level 4.

Moderation options:

1. Anyone assessing a learner or moderating the assessment of a learner against this qualification must be registered as an assessor with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.
2. Any institution offering learning that will enable achievement of this qualification must be accredited as a provider through the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO by SAQA.
3. The POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO will oversee assessment and moderation of assessment according to the moderation guidelines in the relevant competency and the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO procedures.
4. Moderation must include both internal and external moderation of assessment at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should encompass

achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

5. Anyone wishing to be assessed against this competency may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.

Criteria for registration of assessors:

Assessors need experience in the following areas:

- Interpersonal skills, subject matter and assessment.
- The assessor needs to be competent in the planning and conducting of assessment of learning outcomes and in the design and development of assessments as described in the unit standards plan and conduct assessment of learning outcomes NQF level 5.
- Subject matter experience must be well developed within the field of general security operations

The assessor must have completed:

A similar qualification with a minimum of 06 months field experience after he/she has completed the qualification or,

- The subject matter experience of the assessor can be established by recognition of prior learning.

The assessors need to be registered with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.

Notes supporting this qualification:**Matrix of National Certificate in Security Practices: General at NQF 03.**

National Certificate in Security Practices: General at NQF level 03.			135 Credits
Fundamental	L	Cr	Core
Communicate verbally & non verbally in the workplace - 9961	3	05	Ensure asset protection through access and
Read analyse and respond to a variety of texts -8975	3	05	Protection of premises and assets under all
Write texts for a range of communicative contexts 8970	3	05	Attend and give evidence in court
Use language and communication in occupational learning programmes- 8973	3	05	Safe and secure escorting of valuables, peo
Use mathematics to investigate and monitor the financial aspects of personal and business issues- 9011	3	06	Receive, report and react to customers co environment
Investigate life related problems using data and probabilities - 9012	3	06	Manage own performance and work as part
Describe, apply, analyse and calculate shape and motion in 2-and 3-dimentional space in different contexts - 9013	3	04	Effecting a lawful citizens arrest
Total available credits		36	Total available credits
Electives (Choose a minimum of 16 credits)			
Handle a dog to deter crime and for protection			
Caring for the welfare of a service dog.			
Supervision of service dogs in a kennel environment			
Use of a handgun - 10748			
Use of a hand machine carbine - 10756			
Use of a shotgun - 10754			
Use of a rifle - 10750			
Coach learners – 9926			
Respond to emergency signals & situations – (NC in Security Practices: Specialist Security Officer)			
Identify, handle and defuse security related conflict (NC in Security Practices: Specialist Security Officer)			
Care for customers - 8600			
Operate a personal computer - 7786			
Apply health and safety practices in the workplace - 9983			
Knowledge, comprehension and application of basic life support and first aid - 9996			
Knowledge, comprehension and application of basic fire fighting (NSB 06 CISGB)			

UNIT STANDARDS FOR SECURITY NATIONAL CERTIFICATE IN SECURITY PRACTICES: GENERAL

FIELD: LAW, MILITARY SCIENCE AND SECURITY

SUBFIELD: SAFETY IN SOCIETY

NQF LEVEL: 3

UNIT STANDARDS AT NQF LEVEL 2

Title 1: Caring for the welfare of a service dog.

Title 2: Handle a dog to deter crime and for protection

UNIT STANDARDS AT NQF LEVEL 3

Title 1: Ensure asset protection through access and egress control.

Title 2: Protection of premises and assets under all conditions.

Title 3: Attend and give evidence in court.

Title 4: Safe and secure escorting of valuables, people and suspects.

Title 5: Receive, report and react to customers' complaints within a security environment.

Title 6: Manage own performance and work as part of a security team.

Title 7: Effecting a lawful citizen's arrest.

Title 8: Supervision of service dogs in a kennel environment.

NATIONAL CERTIFICATE IN SECURITY PRACTICES: GENERAL NQF LEVEL 3**SPECIFIC OUTCOMES OF UNIT STANDARDS**

- | | | |
|-----------------------|--|---|
| 1. | Title: | Ensure asset protection through access and egress control. |
|
 | | |
| Specific outcome 1.1: | Apply effective hand over and take over of access\egress control site. | |
| Specific outcome 1.2: | Operate and maintain access\egress control site effectively and safely. | |
| Specific outcome 1.3: | Apply knowledge and understanding of searching people, vehicles, goods and articles. | |
| Specific outcome 1.4: | Conclude operations at an access\egress control site. | |
|
 | | |
| 2. | Title: | Protect premises and assets under all conditions. |
|
 | | |
| Specific outcome 2.1: | Prepare for duty at area of responsibility. | |
| Specific outcome 2.2: | Observe , identify and monitor potential and existing threats. | |
| Specific outcome 2.3: | Safeguard premises and assets by patrolling and static guarding. | |
| Specific outcome 2.4: | Conclude operations for safeguarding of premises and assets. | |

3. Title: Safe and secure escorting of valuables and suspects.

Specific outcome 3.1: Identify escorting requirements.

Specific outcome: 3.2: Prepare for escort assignment.

Specific outcome 3.3: Ensure suspect/valuables/persons is ready to escort.

Specific outcome 3.4: Undertake escort.

4. Title: Effect a lawful citizen's arrest.

Specific outcome 4.1: Apply knowledge and understanding of relevant legislation required for effecting a lawful citizen's arrest.

Specific outcome 4.2: Prepare for apprehension.

Specific outcome 4.3: Perform a citizens arrest.

Specific outcome 4.4: Detain a suspect and hand him/her over to the authorities.

5. Title: Attend and give evidence in court.

Specific outcome 5.1: Prepare oneself to give evidence.

Specific outcome 5.2: Present the evidence in court.

Specific outcome 5.3: Record the court verdict and provide feedback.

6. Title: Receive, report and react to customer complaints within a security environment.

Specific outcome 6.1: Build and maintain positive customer relations.

Specific outcome 6.2: React to customer inquiries and problems.

Specific outcome 6.3: Communicate with customer and/or superior to resolve problems.

7. Title: Manage own performance and work as part of a security team.

- Specific outcome 7.1: Plan for completion of own task.
- Specific outcome 7.2: Maintain quality of own performance.
- Specific outcome 7.3: Provide back-up support.
- Specific outcome 7.4: Establish his role within a security team.
- Specific outcome 7.5: Contribute to team effectiveness.

8. Title: Care for the welfare of a service dog.

- Specific outcome 8.1: Ensure that the basic needs of the service dog are catered for.
- Specific outcome 8.2: Conduct safety precautions with the service dog in order to prevent accidents.
- Specific outcome 8.3: Transport service dogs in a safe and secure manner.
- Specific outcome 8.4: Inspect the condition of the service dog.

9. Title: Handle a service dog to deter crime and for protection.

- Specific outcome 9.1: Prepare a trained service dog for guarding duties.
- Specific outcome 9.2: Utilize the trained service dog for guarding duties.
- Specific outcome 9.3: Conduct post-guarding responsibilities with regards to the trained service dog.

10. Title: Supervise service dogs in a kennel environment.

Specific outcome 11.1: Ensure that the daily routine maintenance on the kennels is executed.

Specific outcome 11.2: Complete records with regards to the maintenance of service dogs.

Specific outcome 11.3: Ensure proper maintenance of a service dog.

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**TITLE:** National Certificate in Security Practices: Specialist (NQF level 04)**LEVEL:** 4**CREDITS:** 130**FIELD:** Law, Military Science and Security**SUB-FIELD:** Safety in Society**ISSUE DATE:****REVIEW DATE:****Rationale for the qualification:**

This qualification reflects the workplace-based needs of the private security industry that are expressed by employers and employees, both now and for the future. This qualification provides the learner with accessibility to be employed within the private security industry and provides the flexibility to pursue a security career with a wide variety of specialisation options and articulation within the private security industry.

Purpose of the qualification:

This qualification will allow a learner in the Private Security Industry to obtain a nationally recognised qualification in Security Practices. This qualification will enable creative coordination of professional, feasible, up to date, secure and safe providing of security services. A qualifying learner will be able to demonstrate knowledge and understanding of

specialised security practices that bring about a level of professionalism within the private security industry expected at national level.

A learner will contribute positively towards supporting the private security industry as a part of South Africa's safety in society sector.

A learner who has achieved this qualification will be capable of combining a range of self-organisation and life long skills with a working knowledge of South African private security issues, and integrating these within a context to produce a professional practise which adheres to the high quality standards as expected by the private security industry.

It will also contribute to the upliftment of persons involved in providing a security service and will set a standard for professionalism in the private security industry. The qualification will assist in changing perceptions of lack of expertise and consistency within the private security industry. This will also assist in improving relationships between members of the private security industry, law enforcement agencies and official institutions and the community at large. This qualification will provide for recognition of prior learning to allow for the recognition of existing and common knowledge and skills that will not only allow a learner to gain credits towards this qualification, but to progress to further learning.

The generic core unit standards provide credits that allow access to both vertically and horizontally articulated qualifications. This qualification will enhance the status, accountability and employability of the learner within the private security industry as well as contribute to the quality and growth within the industry.

Through the electives component of the qualification learners are able to demonstrate specific specialised vocational skills. Qualifying learners are capable of using a series of learning, legal and specialised skills to protect and serve clients and members of communities in accordance with relevant legislation and the constitution of the Republic of South Africa.

This will as previously stated attract quality people and allows for the aspiration of people to be part of the private security industry.

A learner acquiring the qualification National Certificate in Security Practices: Specialist, will have applied knowledge, skills and workplace experience to provide specialist security

services within the required legal framework and in the service of maintaining a safe and secure society.

Access to the qualification:

Open access.

All persons meeting the minimum requirements as prescribed in the Private Security Industry Regulatory Authority (SIRA) Act 56 of 2001, that is, the restriction of people with previous convictions that have dishonesty or serious violence as elements.

Learning assumed to be in place:

It is assumed that learners wishing to enter a program leading to this qualification have literacy, numeracy and communication skills equivalent to NQF level 3.

The National Certificate in Security Practices: General at NQF level 03.

Core & Specialised elective exit level outcomes:

A combination of core and elective unit standards with their associated specific outcomes and assessment criteria would serve as exit points to the qualification within the Private Security Industry.

Refer to notes supporting this qualification for rules of combination and the qualifications matrix.

This qualification will enable qualifying learners to specialise in a wide selection of specialist disciplines.

Exit level outcome 01

Give security orders & instructions.

Associated assessment criteria:

- The correct sequence for giving clear orders/instructions is prepared and followed.

- The orders are given or issued in a simple, direct, brief, accurate and complete manner.
- Understanding of orders & instructions is clarified & interrogated.
- Feedback is received and/or a debriefing session is conducted.

Exit level outcome 02

Identify, handle and defuse security related conflict.

Associated assessment criteria:

- Conflict situations are identified.
- Conflict situations are handled and defused.
- Feedback on conflict situation is provided.

Exit level outcome 03

Conduct evacuations and emergency drills.

Associated assessment criteria:

- The emergency or safety situation is identified and assessed.
- Course of action to deal with the emergency or safety situation is initiated.
- An evacuation in accordance with workplace procedures and relevant legislation is implemented and supervised.

Exit level outcome 04

Conduct a security threat assessment in a defined operational area.

Associated assessment criteria:

- Security risks are identified.
- Risks are analysed.
- Risk potential is determined.
- Solutions to counter/minimise risk are recommended.

Exit level outcome 05

Write security reports & take statements.

Associated assessment criteria:

- Knowledge and understanding of the requirements for effective report writing are applied.
- A complete and concise report is compiled.
- A written statement is taken.

Exit level outcome 06

Respond to emergency signals & situations.

Associated assessment criteria:

- Duty in area of responsibility is prepared for.
- Area of responsibility is effectively safeguarded.
- Emergency signals & incidents in area of responsibility are tactically responded to.
- Operations are concluded for effective handover.

Exit level outcome 07

Provide close protection of designated persons.

Associated assessment criteria:

- The principals brief and risk profile are ascertained.
- The transit/foot/venue protection operation of a principal is planned.
- A principal is protected during transit/foot/venue movement.
- The protection operation is terminated and reviewed.

Exit level outcome 08

Provide for protection of aircraft, travellers and or travel terminals.

Associated assessment criteria:

- Civil aviation is protected against acts of unlawful interference.
- Dangerous goods are identified and effectively dealt with.
- Hazards are recognized, safety is adhered to and a culture of safety/security awareness is instilled amongst persons working airside.
- Security/safety of persons and items being placed on board aircraft are controlled.

Exit level outcome 09

Protect assets in transit.

Associated assessment criteria:

- Assets in transit protection duty are prepared for.
- Assets during collection, in-transit and delivery operations are secured and protected.
- Emergency incidents are tactically reacted to.
- Assets in transit operations for effective handover are concluded.

Exit level outcome 10

Operate effectively within a specified control room environment.

Associated assessment criteria:

- Workstation is prepared for commencement of duty.
- Emergency & non emergency signals are monitored and acted upon.
- Relevant role players are dealt with effectively.
- Operations are concluded for effective handover.

Exit level outcome 11

Operate, interpret and monitor security activities from venue operations centre.

Associated assessment criteria:

- Safety and security activities of stadium security officers/staff are monitored.
- Responses to alarm, emergency or incident signals are co-ordinate and operation centre information is updated for ongoing assessment.

- Authenticity of venue systems and requests are communicated and assessed.
- Response to information and incidents is evaluated and provided.
- Duties are handed over.

Exit level outcome 12

Monitor, control and direct crowds at special events.

Associated assessment criteria:

- Security presence at a venue is inspected and provided.
- Crowd size movement , stress , behaviour and safety is monitored.
- Potential crowd problems/breaches of sporting etiquette are reacted to.
- Crowds at special events are directed.
- The monitoring of and response to unlawful or suspicious incidents are prepared for.

Exit level outcome 13

Handle a dog to assist in the apprehension of a violent suspect.

Associated assessment criteria:

- A crime scene is evaluated.
- The dog is prepared for searching and apprehension of a suspect for the purpose of effecting a lawful arrest.
- The dog is utilised to assist in apprehending and arresting an identified suspect.
- Appropriate procedures are followed after the arrest.

International comparability:

Benchmarking was done against the Australian standards appropriate for security and investigative services and showed a substantial degree of similarity.

International comparability could therefore be found to support this qualification.

It is the Security SGB's intent to continue benchmarking with other countries.

Benchmarking with international qualifications becomes difficult due to the major difference in their methodology used, Australia, however are very similar to the south African NQF.

Integrated assessment:

The practical, applied, foundational and reflective competencies demonstrated for the group of unit standards in this qualification must proof that the whole competence is more than the sum of the parts of the competencies.

Integrated assessments at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across unit standards to achieve competence that is grounded and coherent in relation to the purpose of the qualification.

The applied competence (practical, foundational and reflective competencies) of this qualification will be achieved if a person is able to provide effective security supervision and/or response to emergency signals & situations and/or close protection of designated persons and/or protection of aircraft, travellers and travel terminals and/or protect assets in transit and/or control room operations and/or special events security and/or apprehension of violent suspects using dogs. The application of these competencies must be safe for society, quality assured and comply with minimum legislation.

The identifying and solving of problems, team work, organising one-self, the using of applied science, the implications of actions and reactions in the world as a set of related systems must be assessed during any combination of practical, foundational and reflexive competency assessment methods and tools to determine the whole person development and integration of applied knowledge and skills.

Applicable assessment tools to establish the foundational, reflective and embedded knowledge to problem solving and application of the world as a set of related systems within the private security environment.

A broad range of task orientated and theoretical assessment tools may be used.

A detailed portfolio of evidence is required to proof the practical, applied and foundational competencies of the learner.

Assessors and moderators (registered with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO) should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of

learning that has already been acquired through formal, informal and non-formal learning and experience.

Recognition of prior learning:

This competency may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non formal learning and assessment /coaching experience.

Articulation possibilities:

This qualification has been developed for professional specialisation practices across the private security industry. The intent is to ensure professionalism within the private security industry and ensuring the increase of occupational performance standards in general. The qualification will allow a person to acquire, through the selection of applicable specialist elective standards, a recognised specialist area as exit point after achieving the National Certificate in Security Practices: Specialist at NQF level 4.

Moderation options:

1. Anyone assessing a learner or moderating the assessment of a learner against this qualification must be registered as an assessor with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.
2. Any institution offering learning that will enable achievement of this qualification must be accredited as a provider through the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO by SAQA.
3. The POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO will oversee assessment and moderation of assessment according to the moderation guidelines in the relevant competency and the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO procedures.
4. Moderation must include both internal and external moderation of assessment at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

5. Anyone wishing to be assessed against this competency may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.

Criteria for registration of assessors:

Assessors need experience in the following areas:

- Interpersonal skills, subject matter and assessment.
- The assessor needs to be competent in the planning and conducting of assessment of learning outcomes and in the design and development of assessments as described in the unit standards plan and conduct assessment of learning outcomes NQF level 5.
- Subject matter experience must be well developed within the field of specialist security operations

The assessor must have completed:

A similar qualification with a minimum of 06 months field experience after he/she has completed the qualification or,

- The subject matter experience of the assessor can be established by recognition of prior learning.

The assessors need to be registered with the POSLEC SETA ETQA/AND ANY OTHER BODY WITH WHOM A MOU WAS ENTERED INTO.

Notes supporting this qualification:**Rules of combination:**

- All fundamental unit standards are compulsory (36 Credits)
- All core unit standards are compulsory (74 Credits)
- A selection of Elective unit standards to provide for the various specialist areas is compulsory. The areas of specialisation and selected elective standards are as follows:

1. Supervisory Specialist:

Electives: (25 Credits)

- Supervise workers at NQF levels 02 & 03 - 9482 (10)
- Plan & conduct assessment of learners in the workplace (15)

2. Response Specialist:

Electives: (42 Credits)

- Respond to emergency signals & incidents (20)
- Use firearms in tactical duty/job related incidents (22)

3. Assets in Transit Specialist:

Electives: (40 Credits)

- Protect Assets in Transit (18)
- Use firearms in tactical duty/job related incidents (22)

4. Aviation Specialist:

Electives: (42 Credits)

- Provide for protection of aircraft, travellers and or travel terminals (20)
- Use firearms in tactical duty/job related incidents (22)

5. Close Protection Specialist:

Electives: (62 Credits)

- Close protection of persons. (40)
- Use firearms in tactical duty/job related incidents (22)

6. Special Events Specialist:

Electives: (25 Credits)

- Operate, interpret & monitor security activities from venue operations centre (15)

- Monitor, control and direct crowds at special events (10).

7. Dog Handler Specialist:

Electives: (17 Credits)

- Handle a dog to assist in the apprehension of a violent suspect (17)

8. Control Room Specialist:

Electives: (14 Credits)

- Operate effectively within a specified control room environment (14)

A learner acquiring the qualification National Certificate in Security Practices: Specialist, will have a choice of specialisation options through the electives, that is, a learner choosing any one pair of the electives as described in rules of combination will achieve a National Certificate in Security Practices: Supervisory Specialist, Response Specialist, etc.

Matrix of National Certificate in Security Practices: Specialist at NQF 04.

National Certificate in Security Practices: Specialist at NQF level 04. 130 Credits					
Fundamental	L	Cr	Core	L	Cr
Engage in sustained oral communication and evaluate spoken texts- 8974	4	05	Give security orders and instructions	4	15
Read analyse and respond to a variety of texts - 8975	4	05	Write security reports & take statements.	4	10
Write for a range of contexts	4	05	Conduct evacuations and emergency drills.	4	17
Use language and communication in occupational learning programmes- 8979	4	05	Conduct a security threat assessment in a defined operational area.	4	20
Use mathematics to investigate and monitor the financial aspects of personal, business, national issues- 8983	4	06	Identify, handle and defuse security related conflict.	4	12
Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems- 9015	4	06			
Represent, analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts- 9016	4	04			
Total available credits		36	Total available credits		74
Electives (Choose a minimum of 20 credits)				L	Cr
Supervise workers at NQF levels 02 & 03 - 9482				4	10
Plan and conduct assessments of learners in the workplace - 7978				5	15
Coach learners - 9926				3	10
Implement policies regarding HIV/AIDS in the workplace - 9224				5	04
Defensive driving skills (SERVICES SGB)				3	10
Use firearms in tactical duty/job related incidents - 10757				5	22
Operate, interpret and monitor security activities from venue operations centre.				4	15
Monitor, control and direct crowds at special events.				4	10
Respond to emergency signals & incidents				4	20
Operate effectively within a specified control room environment				4	15
Provide close protection of persons.				5	40
Provide for protection of aircraft, travellers and or travel terminals				4	20
Protect Assets in Transit				4	18
Handle a dog to assist in the apprehension of a violent suspect				4	17

**UNIT STANDARDS FOR NATIONAL CERTIFICATE IN SECURITY PRACTICES:
SPECIALIST NQF Level 4****FIELD: LAW, MILITARY SCIENCE AND SECURITY****SUBFIELD: SAFETY IN SOCIETY****NQF LEVEL: 4****UNIT STANDARDS AT NQF LEVEL 4**

- Title 1: Give security orders & instructions.
- Title 2: Identify, handle and defuse security related conflict.
- Title 3: Conduct evacuations and emergency drills.
- Title 4: Conduct a security threat assessment in a defined operational area.
- Title 5: Write security reports & take statements.
- Title 6: Respond to emergency signals & situations.
- Title 7: Provide close protection of designated persons.
- Title 8: Provide for protection of aircraft, travellers and or travel terminals.
- Title 9: Protect assets in transit.
- Title 10: Operate effectively within a specified control room environment.
- Title 11: Operate, interpret and monitor security activities from venue operations centre.
- Title 12: Monitor, control and direct crowds at special events.
- Title 13: Handle a dog to assist in the apprehension of a violent suspect.

SECURITY PRACTICES: SPECIALIST SECURITY OFFICER NQF LEVEL 4**SPECIFIC OUTCOMES OF UNIT STANDARDS**

- 1. Title: Give security orders & instructions.**
 - Specific outcome 1.1: Prepare and follow the correct sequence for giving clear orders/instructions.
 - Specific outcome 1.2: Give or issue the orders in a simple, direct, brief, accurate and complete manner.
 - Specific outcome 1.3: Clarify & interrogate understanding of orders & instructions.
 - Specific outcome 1.4: Receive feedback and/or conduct a debriefing session.
- 2. Title: Identify, handle and defuse security related conflict.**
 - Specific outcome 2.1: Identify conflict situations.
 - Specific outcome 2.2: Handle & defuse conflict situation.
 - Specific outcome 2.3: Provide feedback on conflict situation.
- 3. Title: Conduct evacuations and emergency drills.**
 - Specific outcome 3.1: Identify and assess the emergency or safety situation.
 - Specific outcome 3.2: Initiate course of action to deal with the emergency or safety situation.
 - Specific outcome 3.3: Implement and supervise an evacuation in accordance with workplace procedures and relevant legislation.

4. Title: Conduct a security threat assessment in a defined operational area.

- Specific outcome 4.1: Identify security risks.
- Specific outcome 4.2: Analyse risks.
- Specific outcome 4.3: Determine risk potential.
- Specific outcome 4.4: Recommend solutions to counter/minimise risk.

5. Title: Write security reports & take statements.

- Specific outcome 5.1: Apply knowledge and understanding of the requirements for effective report writing.
- Specific outcome 5.2: Compile a complete and concise report.
- Specific outcome 5.3: Take a written statement.

6. Title: Respond to emergency signals & situations.

- Specific outcome 6.1: Prepare for duty in area of responsibility.
- Specific outcome 6.2: Effectively safeguard area of responsibility.
- Specific outcome 6.3: Respond tactically to emergency signals & incidents in area of responsibility.
- Specific outcome 6.4: Conclude operations for effective handover.

7. Title: Provide close protection of designated persons.

- Specific outcome 7.1: Ascertain the principals brief and risk profile.
- Specific outcome 7.2: Plan the transit/foot/venue protection operation of a principal.
- Specific outcome 7.3: Protect a principal during transit/foot/venue movement.
- Specific outcome 7.4: Terminate and review the protection operation.

8. Title: Provide for protection of aircraft, travellers and or travel terminals

- Specific outcome 8.1: Protect civil aviation against acts of unlawful interference.
- Specific outcome 8.2: Identify and effectively deal with dangerous goods.
- Specific outcome 8.3: Recognize hazards, adhere to safety and instil a culture of safety/security awareness amongst persons working airside.
- Specific outcome 8.4: Control security/safety of persons and items being placed on board aircraft.

9. Title: Protect assets in transit.

- Specific outcome 9.1: Prepare for assets in transit protection duty.
- Specific outcome 9.2: Secure and protect assets during collection, in-transit and delivery operations.
- Specific outcome 9.3: React tactically to emergency incidents.
- Specific outcome 9.4: Conclude assets in transit operations for effective handover.

10. Title: Operate effectively within a specified control room environment.

- Specific outcome 10.1: Prepare workstation for commencement of duty.
- Specific outcome 10.2: Monitor and action emergency & non emergency signals.
- Specific outcome 10.3: Deal effectively with relevant role players.
- Specific outcome 10.4: Conclude operations for effective handover.

11. Title: Operate, interpret and monitor security activities from venue operations centre.

Specific outcome 11.1: Monitor safety and security activity of stadium security officers/staff.

Specific outcome 11.2: Co-ordinate responses to alarm, emergency or incident signals and update operation centre information for ongoing assessment.

Specific outcome 11.3: Communicate and assess the authenticity of venue system and request.

Specific outcome 11.4: Evaluate and provide respond to information and incidents.

Specific outcome 11.5: Handover duties.

12. Title: Monitor, control and direct crowds at special events.

Specific outcome 12.1: Inspect and provide security presence at a venue.

Specific outcome 12.2: Monitor crowd size movement, stress, behaviour and safety.

Specific outcome 12.3: React to potential crowd problems/breaches of sporting etiquette.

Specific outcome 12.4: Direct crowds at special events.

Specific outcome 12.5: Prepare to monitor and respond to unlawful or suspicious incidents.

13. Title: Handle a dog to assist in the apprehension of a violent suspect.

Specific outcome 13.1: Evaluate a crime scene.

Specific outcome 13.2: Prepare the dog to search for and apprehend a suspect for the purpose of lawful arrest.

Specific outcome 13.3: Utilise the dog to assist in apprehending and arresting an identified suspect.

Specific outcome 13.4: Ensure that appropriate procedures are followed after the arrest.

No. 814

14 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Electrical Engineering Construction

Registered by NSB 12, Physical Planning and Construction, publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address ***below and no later than 7 July 2002***. All correspondence should be marked **Standards Setting – SGB for Electrical Engineering Construction** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. D Mphuthing

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

**ELECTRICAL UNIT STANDARDS FOR THE GENERAL EDUCATION
AND TRAINING CERTIFICATE IN BASIC TECHNICAL PRACTICE (ENERGY 01)
AND NATIONAL CERTIFICATE IN ELECTRICAL ENGINEERING LEVEL 02-04
FOR GAZETTING BY THE SGB FOR ELECTRICAL ENGINEERING AND
CONSTRUCTION UNDER NSB 12**

Unit Standards Titles

Unit Standards Titles at NQF 1

- Title 1:** Inspect, record data of a battery, clean batteries and battery room
- Title 2:** Interpret, construct and wire single phase circuits
- Title 3:** Select, use and maintain specialised tools for reticulation network construction

Unit Standards Titles at NQF 2

- Title 1:** Fault find on single phase alternating current (AC) systems
- Title 2:** Maintain safety at road works In Urban Areas

Unit Standards Titles at NQF 3

- Title 1:** Construct Medium Voltage reticulation networks
- Title 2:** Fault find on alternating current (AC) and direct current (DC) systems
- Title 3:** Install and commission DC machines
- Title 4:** Maintain low voltage switchgear
- Title 5:** Maintain three phase high voltage motors

Unit Standards Titles at NQF 4

- Title 1:** Inspect, test and maintain high voltage power transformers
- Title 2:** Inspect, test, and maintain high voltage switch gear
- Title 3:** Inspect, test, and maintain high voltage isolators
- Title 4:** Maintain DC machines
- Title 5:** Test and inspect a commercial/industrial installation

Title 6: Test and inspect a domestic installation.

Title 7: Test and inspect an electrical installation in a hazardous area

Unit Standards Titles at NQF 5

Title 1: Issue certificate of compliance for a domestic/commercial/industrial installation

Title 2: Issue certificate of compliance for an electrical installation in a hazardous area

Unit Standards Titles and Specific Outcomes**Unit Standards Titles and Specific Outcomes at NQF 1**

1. Title: Inspect, record data of a battery, clean batteries and battery room

Specific Outcome 1.1: Plan work task

Specific Outcome 1.2: Prepare work area

Specific Outcome 1.3: Inspect, record data of a battery

Specific Outcome 1.4: Inspect and clean battery room

Specific Outcome 1.5: Complete work task

2. Title: Interpret, construct and wire single phase circuits

Specific Outcome 2.1: Identify symbols and components

Specific Outcome 2.2: Understand and describe the functioning of circuits and components

Specific Outcome 2.3: Sketch and construct basic single phase circuits

3. Title: Select, use and maintain specialised tools for reticulation network construction

Specific Outcome 3.1: Select, use and maintain specialised equipment for reticulation cable / conductor running-out

Specific Outcome 3.2: Select, and use and maintain specialised reticulation conductor stringing and tensioning tools and equipment

Specific Outcome 3.3: Select, and use and maintain specialised reticulation conductor cutting / jointing / terminating tools and equipment

Specific Outcome 3.4: Inspect and report the condition and serviceability of specialised reticulation tools and equipment

Unit Standards Titles and Specific Outcomes at NQF 2**1. Title:** Fault find on single phase alternating current (AC) systems

Specific Outcome 1.1: Explain the principles and procedures (techniques) to be applied during fault finding on single phase alternating current (AC) systems

Specific Outcome 1.2: Plan and prepare for fault finding on single phase alternating current (AC) systems

Specific Outcome 1.3: Find faults on single phase alternating current systems

Specific Outcome 1.4: Complete fault finding on single phase alternating current systems

2. Title: Maintain safety at road works In Urban Areas

Specific Outcome 2.1: Plan work task

Specific Outcome 2.2: Plan transportation of equipment and workforce

Specific Outcome 2.3: Set-up temporary road sign procedures

Specific Outcome 2.4: Complete work tasks

Unit Standards Titles and Specific Outcomes at NQF 3**1. Title:** Construct Medium Voltage reticulation networks

Specific Outcome 1.1: Plan Work Task

Specific Outcome 1.2: Construct Medium Voltage Networks

Specific Outcome 1.3: Inspect and test Medium Voltage reticulation networks

Specific Outcome 1.4: Conclude the work task

2. Title: Fault find on alternating current (AC) and direct current (DC) systems

- Specific Outcome 2.1:** Explain the principles and procedures (techniques) to be applied during fault finding on alternating current (AC) and/or direct current (DC) systems
- Specific Outcome 2.2:** Plan and prepare for fault finding on alternating current (AC) and/or direct current (DC) systems
- Specific Outcome 2.3:** Find faults on alternating current and/or direct current systems
- Specific Outcome 2.4:** Complete fault finding on alternating current and/or direct current systems

3. Title: Install and commission DC machines

- Specific Outcome 3.1:** Plan task and select D.C. machines
- Specific Outcome 3.2:** Install D.C. machines
- Specific Outcome 3.3:** Connect D.C. machines
- Specific Outcome 3.4:** Commission and test D.C. machines

4. Title: Maintain low voltage switchgear

- Specific Outcome 4.1:** Plan to maintain low voltage switchgear
- Specific Outcome 4.2:** Prepare for planned maintenance of low voltage switchgear
- Specific Outcome 4.3:** Maintain LV switchgear
- Specific Outcome 4.4:** Restore maintained LV switchgear
- Specific Outcome 4.4:** Complete work task

5. Title: Maintain three phase high voltage motors

- Specific Outcome 5.1:** Plan to maintain high voltage motors
- Specific Outcome 5.2:** Prepare to maintain high voltage motors
- Specific Outcome 5.3:** Maintain high voltage motors
- Specific Outcome 5.4:** Complete work task and commission motor

Unit Standards Titles and Specific Outcomes at NQF 4**1. Title:** Inspect, test and maintain high voltage power transform

- Specific Outcome 1.1:** Plan for inspection, testing and maintenance on high voltage Power Transformers
- Specific Outcome 1.2:** Prepare for inspection, tests and maintenance on high voltage power transformer
- Specific Outcome 1.3:** Carry out inspection and tests on High voltage power transformers
- Specific Outcome 1.4:** Carry out maintenance on High voltage power transformers
- Specific Outcome 1.4:** Perform function tests and post-maintenance checks
- Specific Outcome 1.4:** Complete all tasks on high voltage power transformers

2. Title: Inspect, test, and maintain high voltage switch gear

- Specific Outcome 2.1:** Plan and prepare for inspection, testing and maintenance on high voltage switch gear
- Specific Outcome 2.2:** Prepare the switch gear for inspection, tests and maintenance
- Specific Outcome 2.3:** Carry out inspection and tests on switch gear
- Specific Outcome 2.4:** Carry out maintenance on switch gear
- Specific Outcome 2.5:** Perform function tests and pre-service checks
- Specific Outcome 2.6:** Complete all tasks on Switch gear

3. Title: Inspect, test, and maintain high voltage isolators

- Specific Outcome 3.1:** Plan and prepare for inspection, testing and maintenance on high voltage Isolators
- Specific Outcome 3.2:** Prepare the Isolator for inspection, tests and maintenance
- Specific Outcome 3.3:** Carry out inspection and tests on switch gear
- Specific Outcome 3.4:** Carry out maintenance on switch gear

Specific Outcome 3.4: Perform function tests and post-maintenance checks

Specific Outcome 3.4: Complete all tasks on Isolators

4. Title: Test and inspect a commercial/industrial installation

Specific Outcome 4.1: Plan Work Task

Specific Outcome 4.2: Test the Installation

Specific Outcome 4.3: Inspect the Installation

Specific Outcome 4.4: Complete the activity

5. Title: Test and inspect a domestic installation

Specific Outcome 5.1: Plan Work Task

Specific Outcome 5.2: Test the Installation

Specific Outcome 5.3: Inspect the Installation

Specific Outcome 5.4: Complete the work task

6. Title: Test and Inspect An Electrical Installation In A Hazardous Area

Specific Outcome 6.1: Plan Work Task

Specific Outcome 6.2: Test the Installation

Specific Outcome 6.3: Inspect the Installation

Specific Outcome 6.4: Complete the work task

Unit Standards Titles and Specific Outcomes at NQF 5

1. Title: Issue certificate of compliance for a domestic/commercial/industrial installation

Specific Outcome 1.1: Plan work task

Specific Outcome 1.2: Test installation

Specific Outcome 1.3: Inspect installation

Specific Outcome 1.4: Complete the activity

2. Title: Issue Certificate of compliance for an electrical installation in a hazardous area

Specific Outcome 2.1: Plan work task

Specific Outcome 2.2: Test installation

Specific Outcome 2.3: Inspect installation

Specific Outcome 2.4: Complete the work task

General Education and Training Certificate in Basic Technical Practice (Energy) - NQF 1: 143 (minimum 129 credits)				
Category			L	Cr
Fundamental				41
Mathematical Literacy and Numeracy	7462	Demonstrate an understanding of real and imaginary number systems	1	2
	7480	Demonstrate an understanding of rational and irrational number systems	1	1
	7485	Demonstrate an understanding of rational and irrational numbers and number	1	1
	7448	Work with patterns in various contexts	1	2
	7457	Work with a wide range of patterns and transformations of functions and solve related problems	1	2
	7451	Collect, analyse, use and communicate numerical data	1	2
	7460	Use structured models to describe and analyse shape and motion in 2- and 3-dimensions	1	3
	7453	Use algebraic notation, conventions and terminology to solve problems.	1	3
Communication Studies and Language	7524	Show a critical awareness of language usage	1	3
	7526	Engage with aesthetic, affective, cultural and social values in texts	1	3
	7528	Identify, access, analyse, use and present information	1	4
	7530	Use appropriate communication skills, conventions and structures for specific purposes and situations	1	4
	7534	Explore and use a variety of strategies to learn	1	3
	7535	Engage with meaning, organization and structure of texts	1	3
Forms of energy; Science and Technology; World of Work	9839	Apply and maintain safety in an electrical environment	1	5
	Core			68
Energy efficiency; Environmental awareness; Managing own work processes, work organisation, resources and quality; Managing personal relationships in a work environment; Occupational health and safety, first aid and fire fighting; Technical components and systems; Hand and power tools and measuring equipment and instruments; Materials and theory				
7495	Demonstrate that a person is a physical, mental, spiritual and social being		1	2
7497	Explain human physical development and sexuality		1	2
7501	Discuss one-to-one family and community relationships and value systems		1	2
7502	Discuss and explain social diversity, human rights and alternative perspectives		1	2
7503	Display a critical understanding of human rights and alternative perspectives		1	2
7496	Practice effective self-management skills		1	2
7504	Demonstrate skills that relate to a safe and secure environment		1	2

7449	Critically analyse how mathematics is used in social, political and economic relations	1	2
7450	Work with measurement in a variety of contexts	1	2
8662	Analyse and communicate workplace data	1	3
7461	Use maps to access and communicate information concerning routes, location and direction.	1	1
7463	Describe and represent objects and the environment in terms of shape, space, time and motion	1	2
10287	Facilitate the use of technology by adult learners In basic skills training	1	1
9881	Mark off basic regular engineering shapes	2	6
8493	Maintain occupational health and safety	2	2
9914	Handle and care for materials	3	12
	Identify, inspect, use, maintain and care for engineering hand tools	1	6
	Install electrical wire ways	1	6
	Maintain electrical distribution boards and panels	1	6
	Select, use and care for power tools	1	5
Electives – minimum credits: 20			34
Distribution; Electrical Construction; Engineering; Generation; Transmission; Renewable Energy; Entrepreneurship; Project Management; Financial Management			
	Maintain and repair a high voltage security fence	2	4
10296	Install an electrical cable	2	3
10253	Restore power by joining a low voltage electrical cable	2	4
10254	Inspect and clean a distribution board.	2	3
10255	Install a distribution board	2	2
10256	Carry out a close inspection and clean a transformer	1	1
10257	Connect a welding plug	2	3
10258	Install a welding socket outlet	2	3
	Carry out a detailed inspection on a flameproof enclosure	2	2
	Terminate and connect a low voltage cable to a source of supply	2	3
	Isolate and restore power to an electrical system	2	2
	Inspect and clean a battery operated tripping unit	2	2
	Repair a lighting system	2	2

National Certificate in Electrical Engineering - NQF 2 131 (minimum 122 credits)				
Category			L	Cr
Fundamental				48
Mathematical Literacy and Numeracy	9882	Read and interpret basic engineering drawings	2	8
	8982	Demonstrate understanding of rational and irrational numbers, and number systems, within the context of relevant calculations	2	3
	8983	Use mathematics to investigate and monitor the financial aspects of personal and community life	2	2
	9009	Apply basic knowledge of statistics in order to investigate life and work related problems	2	3
	9008	Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts	2	3
Communication Studies and Language	8962	Maintain and adapt oral communication	2	5
	8963	Access and use information from texts	2	5
	8964	Write for a defined context	2	5
	8967	Use Language and Communication in Occupational learning programmes	2	5
Science and Technology; World of Work; Forms of energy	7546	Operate a personal computer system	2	6
	9223	Organise oneself in the workplace	2	3
Core				54
Energy efficiency; Environmental awareness; Managing own work processes, work organisation, resources and quality; Managing personal relationships in a work environment; Occupational health and safety, first aid and fire fighting; Technical components and systems; Hand and power tools and measuring equipment and instruments; Materials and theory				
	Design and construct single phase circuit		2	5
	Install and/or replace an electrical metering / measuring instruments		2	4
	Install low voltage transformers		2	6
	Joint low voltage cables		2	5
	Plan, install and terminate, electrical cables and conductors		2	6

	Select, use and care for electrical measuring instruments	2	4
	Construct, commission and do fault tracing on low voltage reticulation networks	2	6
	Install lighting systems	2	4
10239	Maintain intrinsically safe apparatus	2	2
10240	Install or replace an earth leakage unit in a low voltage circuit	2	3
10241	Carry out a detailed inspection on enhanced safety apparatus	2	3
10242	Replace an electrical cable	2	3
10243	Carry out a detailed inspection on a DC motor	2	3
Electives – minimum credits: 20			29
Distribution; Electrical Construction; Engineering; Generation; Transmission; Renewable Energy; Entrepreneurship; Project Management; Financial Management			
	Maintain and repair a high voltage security fence	2	4
10245	Install a straining wire cable support system	2	2
10246	Switch a high voltage inline switch on and off	2	2
10247	Maintain a cam operated DC motor controller	2	5
10248	Carry out a detailed inspection on an electrical motor	2	3
10249	Replace faulty components in a distribution board	2	3
10250	Install a flitting panel	2	3
10251	Repair a flitting panel	2	4
10252	Disconnect and connect an electric motor	2	3

National Certificate in Electrical Engineering - NQF 3 184 (minimum 173 credits)				
Category			L	Cr
Fundamental				56
Mathematical Literacy and Numeracy	9885	Read and interpret engineering drawings	3	12
	9010	Demonstrate understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	3	2
	9011	Use mathematics to investigate and monitor the financial aspects of personal and business issues	3	5
	9012	Investigate life and work related problems using data and probabilities	3	5
	9013	Describe, apply and calculate shape and motion in 2- and 3-dimensional space in different contexts	3	4
Communication Studies and Language	8415	Accommodate audience and context needs in oral communication	3	5
	8969	Interpret and use information from texts	3	5
	8970	Write texts for a range of communicative contexts	3	5
	8973	Use language and communication in occupational learning programmes	3	5
Science and Technology; World of Work; Forms of energy	9888	Select, use and care for marking off/out equipment: routine shapes	3	8
Core				97
Energy efficiency; Environmental awareness; Managing own work processes, work organisation, resources and quality; Managing personal relationships in a work environment; Occupational health and safety, first aid and fire fighting; Technical components and systems; Hand and power tools and measuring equipment and instruments; Materials and theory				
9445	Select power transmission systems and accessories		1	1
	Design and construction three phase circuit		3	5
	Design and install electrical wire ways		3	8
	Fault find, repair and maintain industrial electrical circuits		3	8
	Install and commission electrical measuring instruments and control devices		3	5
	Install and commission single phase AC machines and control gear		3	8
	Maintain and repair three phase AC machines		3	8
	Maintain Luminaires		3	6

	Maintain single phase AC machines and motor control gear	3	6
	Repair and maintain power tools	3	6
	Select, install, connect and commission three phase AC machines	3	6
	Wire and commission domestic electrical circuits	3	8
	Wire and commission industrial electrical circuits	3	8
	Commission single phase transformer	3	4
	Fault finding, testing and repair of domestic appliances	3	6
	Maintain lighting systems	3	4
Electives – minimum credits: 20			31
Distribution; Electrical Construction; Engineering; Generation; Transmission; Renewable Energy; Entrepreneurship; Project Management; Financial Management			
	Construct basic electronic circuits	3	4
10271	Isolate and restore power to a high voltage electrical system	3	4
10272	Change tap settings on a three-phase transformer	3	2
10273	Restore power by joining a high voltage electrical cable	3	6
9836	Inspect and clean an electrical enclosure	2	2
10274	Carry out a detailed inspection on high voltage switchgear	3	7
10274	Repair an electronic control system for AC traction on a trackless machine	3	6

National Certificate in Electrical Engineering - NQF 4: 141 (minimum 122 credits)				
Category			L	Cr
Fundamental				50
Mathematical Literacy and Numeracy	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, and national issues	4	6
	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	4	6
	9016	Measure, estimate and calculate physical quantities and explore, critique and prove geometrical relationships in two and three-dimensional space in the life and workplace of the adult with increasing responsibilities	4	4
Communication Studies and Language	8974	Engage in sustained oral communication and evaluate spoken texts	4	5
	8967	Use language and communication in occupational learning programmes	4	5
	8975	Read analyse and respond to a variety of texts	4	5
	8976	Write for a wide range of contexts,	4	5
	8556	Interact orally and in writing in the workplace	4	14
Core				52
Energy efficiency; Environmental awareness; Managing own work processes, work organisation, resources and quality; Managing personal relationships in a work environment; Occupational health and safety, first aid and fire fighting; Technical components and systems; Hand and power tools and measuring equipment and instruments; Materials and theory				
9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems		4	2
	Diagnose and repair faults on low voltage transformers and equipment		4	6
	Repair three phase AC motor control gear		4	12
	Fault finding on single phase systems		3	5
	Fault finding on three phase systems		4	5
10277	Inspect, test, maintain and commission high voltage transformers		4	10
10279	Identify the correct phase sequence on high voltage transformers and cables		3	3
10280	Replace a 3 phase electrical motor between 5,5 kW and 75 kW		3	3
10281	Connect and commission a 3 phase direct on line motor control system		3	6

Electives – minimum credits: 20			
Distribution; Electrical Construction; Engineering; Generation; Transmission; Renewable Energy; Entrepreneurship; Project Management; Financial Management			39
	Maintain an AC or DC drive unit	4	12
	Audit and specialised repairs on lighting systems	5	5
	Design lighting systems	5	7
	Survey lighting systems	5	7
10285	Change tap settings on a three-phase transformer	3	2
10286	Install an electronic control unit for AC pole changing motors	3	6

No. 815

14 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Water Sector

Registered by NSB 12, Physical Planning and Construction, publishes the following qualifications and unit standard for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standard upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address ***below and no later than 7 July 2002***. All correspondence should be marked **Standards Setting – SGB for Water Sector** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. D Mphuthing

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 482 0907

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**National Certificate in Wastewater Process Operation NQF 2**

Field: Physical Planning and Construction - NSB 12
Sub-field: Civil Engineering Construction
Level: 2
Credit: 120
Issue date:
Review date:

Rationale of the qualification

This qualification reflects the workplace-based needs of wastewater process operators working in the water sector that are expressed by employers and employees, both now and for the future. This qualification provides the learner with accessibility to employment within the water sector and provides the flexibility to pursue different careers within wastewater. The level of flexibility within the range of electives will allow the individual to follow a career at a range of wastewater operations.

Purpose of the qualification

A person acquiring this qualification will be able to operate a minimum of four unit processes at a wastewater treatment works. This qualification forms the foundation for advancement to a qualification as a wastewater process controller on NQF level 4. This qualification also focuses on the full development of the learner and further mobility and transportability within the water sector. This qualification will enhance productivity within the water sector and contribute towards the ecological sustainability and improvement of the water environment. The individual will have the capacity to advance and gain skills and self-respect.

Access to the Qualification

Open access. It is recommended that learners entering the wastewater field complete the wastewater skills programme as an introduction to the sector. This will enable learners to familiarise themselves with the water cycle, water and wastewater systems and processes as well as the purpose of a wastewater treatment works.

Learning assumed to be in place

A knowledge, comprehension and application of language and mathematics at NQF level 1.

Exit level Outcomes**Qualifying learners can:****Exit level 1: Demonstrate an understanding of relevant legislation.****Associated Assessment Criteria**

- Knowledge and comprehension regarding personal safety practices in a wastewater environment is applied according to standard operating procedures and safety requirements.
- Knowledge and comprehension of the National Water Act.

Exit level 2: Operate a minimum of four unit processes at a wastewater treatment works.**Associated Assessment Criteria**

- Operate inlet works at a wastewater works.
- Operate settling process at a wastewater works.
- Handle and dispose of sludge at a wastewater works
- Operate an additional unit process from the range of electives.
- Demonstrate good practice on a wastewater treatment works.
- Apply learning skills and knowledge in their personal, workplace and educational lives.

Exit level 3: Demonstrate an understanding and knowledge of equipment of four unit processes.**Associated Assessment Criteria**

- Demonstrate an understanding and knowledge of the equipment used at the inlet works at a wastewater works.
- Demonstrate an understanding and knowledge of the equipment used at the settling process at a wastewater works.
- Demonstrate an understanding and knowledge of the equipment used when handling and disposing of sludge at a wastewater works
- Demonstrate an understanding and knowledge of the equipment used for an additional unit process from the range of electives.

Exit level 4: Demonstrate interactive skills.**Associated Assessment Criteria**

- Interaction with work colleagues and management on a wastewater works
- Use communication skills to interact in a meaningful way with colleagues
- Use the range of generic skills as a foundation for learning.
- Work with others in both learning and work-orientated situations.

Exit level 5: Demonstrate knowledge of occupational health & safety.**Associated Assessment Criteria**

- Demonstrate knowledge of occupational health & safety.
- Personal health, hygiene and presentation in a wastewater environment is maintained according to the Occupational Health and Safety Act.
- Apply skills relevant to a wastewater context appropriately.

International comparability

The core and elective components have been developed taking into account South Africa's unique context, but also looking at international best practice. Benchmarking was done against the SVQ from Scotland (Monitoring the Water environment: level 2, Operating process Plant: Wastewater level 2, Water Industry Operations: Sewerage Maintenance level 2) as well as Australian qualification (Certificate course in Water and Wastewater). The fundamental components, reflecting foundational learning and generic skills and knowledge have been derived from registered, local adult education unit standards.

Integrated Assessment

Integrated assessment at the level of qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across unit standards to achieve competence that is grounded and coherent in relation to the purpose of the qualification. Integrated assessment should show how already demonstrated competence in individual areas can be linked and applied for the achievement of a holistic outcome.

Integrated assessment must judge the quality of the observable performance, and also the quality of the thinking that lies behind it. Assessment tools must encourage learners to give an account of the thinking and decision-making that underpin their demonstrated performance. Some assessment practices will demand practical evidence while others may be more theoretical, depending on the type of outcomes to be assessed, and the nature and level of the qualification. The ratio between action and interpretation is not fixed, but varies according to the demands of the qualification.

While the generic component (literacy, communication and life skills) of this qualification at NQF Level 2 can be assessed through occupational contexts and activities relating to wastewater treatment, care must be taken in both the learning programme and the assessment to ensure that these foundational skills are truly portable. The primary aim of this qualification is to ensure that learners have a sound base of general education to prepare them for further learning, whatever career path they may choose. Learners must be able to transfer generic skills such as language, computation and learning skills etc across a number of different contexts, and apply them within a number of learning areas.

A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place. Unit standards in the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflexive competencies.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Any learner wishing to be directly assessed may arrange to do so, without attending further training or education. The assessor and learner will decide together on the most appropriate assessment route to be taken.

Articulation possibilities

This qualification will allow a person to articulate to the wastewater qualification on NQF level 4.

Criteria for registration of assessors

For an applicant to register as an assessor, the applicant needs:

- A minimum of two years practical, relevant occupational experience.
- Declared competent in all the outcomes of the of the generic assessor standard, and certificated by the ETDP SETA or by the relevant ETQA in agreement with the ETDP SETA in this regard.
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained by the applicant must be provided (Portfolio of evidence).
- Able to demonstrate competence in relation to these specified standards and qualifications, at or above, the level of the qualifications in question.
- Meet any other additional requirements laid down by their constituent ETQA.

The subject matter experience of the assessor can be established by recognition of prior learning. The status of registered assessors can be checked on the appropriate ETQA database or website.

Moderation

1. Anyone assessing a learner against these standards must be registered as an assessor with the relevant ETQA.
2. Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA.
3. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against this qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

National Certificate in Wastewater Process Operation NQF 2 120 credits								
FUNDAMENTAL The learner must achieve all of the following unit standards. Total 39 credits	L	C	CORE The learner must achieve all of the following unit standards. Total 56 credits	L	C	ELECTIVE The learner must chose a minimum of 25 credits	L	C
Use mathematics to investigate and monitor the financial aspects of personal and community life. (8983)	2	2	Demonstrate Knowledge of Water Cycle, Water and Waste Water Systems and Processes	2	5	Operate Activated Sludge Process	4	18
Demonstrate understanding of rational and irrational numbers, and number systems, within the context of relevant calculations (8982)	2	3	Demonstrate Knowledge of the Purpose of A Wastewater Treatment Works	1	5	Maintain Maturation and Oxidation Ponds	1	2
Apply basic knowledge of statistics in order to investigate life and work related problems. (9009)	2	3	Apply Personal Safety Practices on a Wastewater Treatment Works	2	4	Operate A Biofilter	2	5
Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts (9008)	2	3	Orientate Self in the Workplace	2	6	Operate Anaerobic Digester	4	7
Read and interpret basic engineering drawings (9882)	2	8	Demonstrate Knowledge of Mechanical and Electrical Equipment	2	4	Operate Aerobic Digester	2	5
Maintain and adapt oral communication (8962)	2	5	Operate Inlet Works	2	5	Operate Rotating Biodisc Contactor	2	4
Access and use information from texts (8963)	2	5	Operate Settling Process	2	5	Thicken and Dewater Sludge	4	8
Write for a defined context (8964)	2	5	Demonstrate Dosing of Chlorine Products in A Wastewater Works	2	5	Control Composting Process	2	4
Use Language and Communication in	2	5	Handle and Dispose of Sludge	2	5	Operate Tertiary Filtration Process	2	4

Communication in Occupational learning programmes (8967)						Process		
			Demonstrate Chemical & Bacteriological Sampling Techniques & Field Tests	2	4	Operate Chemical Dosing Unit	2	6
			Demonstrate An Understanding of HIV/ Aids and Its Implications (8494)	2	4	Operate a Computer (7786)	2	6
			Demonstrate Knowledge of Biological Processes	2	4	Perform Basic Life Support and / or First Aid procedures in Emergencies (9823)	1	5
Total credits on level 2		39	Total credits on level 2		5 1			
Total credits		39	Total credits		5 6	Total credits		25

National Certificate in Wastewater Process Operation NQF 2**UNIT STANDARDS ON NQF LEVEL 1**

- Title 1: Demonstrate Knowledge of the Purpose of a Wastewater Treatment Works
- Title 2: Maintain Maturation and Oxidation Ponds
- Title 3: Perform Basic Life Support and / or First Aid procedures in Emergencies (AHC 2)

UNIT STANDARDS ON NQF LEVEL 2

- Title 1: Demonstrate Knowledge of Water Cycle, Water and Waste Water Systems and Processes
- Title 2: Apply Personal Safety Practises on a Wastewater Treatment Works
- Title 3: Orientate Self in the Workplace
- Title 4: Demonstrate Knowledge of Mechanical And Electrical Equipment
- Title 5: Operate Inlet Works
- Title 6: Operate Settling Process
- Title 7: Demonstrate Dosing of Chlorine Products in A Wastewater Works
- Title 8: Handle and Dispose of Sludge
- Title 9: Demonstrate Chemical & Bacteriological Sampling Techniques and Field Tests
- Title 10: Operate A Biofilter
- Title 11: Operate Aerobic Digester
- Title 12: Operate Rotating Biodisc Contactor
- Title 13: Control Composting Process
- Title 14: Operate A Tertiary Filtration Process
- Title 15: Operate Chemical Treatment Process
- Title 16: Demonstrate Knowledge of Biological Processes

UNIT STANDARDS ON NQF LEVEL 4

Title 1: Operate Activated Sludge Process

Title 2: Operate Anaerobic Digester

Title 3: Thicken and Dewater Sludge.

Unit Standards And Specific Outcomes For The National Certificate In Wastewater Process Operation NQF 1**1. TITLE: DEMONSTRATE KNOWLEDGE OF THE PURPOSE OF A WASTEWATER TREATMENT WORKS**

- Specific outcome 2.1: Explain the properties of water and water contaminants.
- Specific outcome 2.2: Explain different sources of wastewater.
- Specific outcome 2.3: Explain the objectives and principles of wastewater treatment.
- Specific outcome 2.4: Explain the purpose of a wastewater works.
- Specific outcome 2.5: Explain different types of sanitation systems.
- Specific outcome 2.6: Explain the purpose and care of tools on a wastewater treatment works.
- Specific outcome 2.7: Explain health and safety requirements at a wastewater treatment works.

2. TITLE: MAINTAIN MATURATION AND OXIDATION PONDS

- Specific outcome 2.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 2.2: Monitor anaerobic ponds.
- Specific outcome 2.3: Monitor aerobic ponds.
- Specific outcome 2.4: Maintain inlets and outlets in accordance with work policies and procedures.
- Specific outcome 2.5: Control vegetation and pests along the banks of the pond.
- Specific outcome 2.6: Complete designated tasks.

UNIT STANDARDS AT NQF LEVEL 2**1. TITLE: DEMONSTRATE KNOWLEDGE OF WATER CYCLE, WATER AND WASTE WATER SYSTEMS AND PROCESSES**

- Specific outcome 1.1: Identify and explain the elements of the natural water cycle.
- Specific outcome 1.2: Explain the principles of water catchment.
- Specific outcome 1.3: Explain the concepts of ground water collection and extraction.
- Specific outcome 1.4: Explain the concepts of surface water collection and abstraction.
- Specific outcome 1.5: Identify possible sources of pollution of water and explain appropriate corrective action.
- Specific outcome 1.6: Explain the importance of legislation within the water sector.

Specific outcome 1.7: Identify and explain common water related diseases.

2. TITLE: APPLY PERSONAL SAFETY PRACTICES IN THE WATER SECTOR

Specific outcome 2.1: Demonstrate knowledge of personal safety.

Specific outcome 2.2: Demonstrate knowledge of the purpose of a health and safety representative.

Specific outcome 2.3: Explain personal safe working practices in accordance with work policies and procedures.

Specific outcome 2.4: Demonstrate emergency procedures.

Specific outcome 2.5: Explain good housekeeping practices.

Specific outcome 2.6: Explain the dangers of working with moving machinery.

3. TITLE: ORIENTATE SELF IN THE WORKPLACE

Specific outcome 3.1: Explain the health and safety procedures relating to own job.

Specific outcome 3.2: Explain reporting procedures at own works.

Specific outcome 3.3: Explain security procedures.

Specific outcome 3.4: Explain organisational structure for own works.

Specific outcome 3.5: Explain layout of own works.

Specific outcome 3.6: Explain key performance areas of own job.

Specific outcome 3.7: Explain work policies and procedures relating to own job.

4. TITLE: DEMONSTRATE KNOWLEDGE OF MECHANICAL AND ELECTRICAL EQUIPMENT

Specific outcome 4.1: Explain the function and operation of pumps.

Specific outcome 4.2: Explain the function and operation of valves.

Specific outcome 4.3: Explain the function and operation of blowers and compressors.

Specific outcome 4.4: Explain monitoring and maintenance procedures for mechanical equipment.

Specific outcome 4.5: Explain safe operation of electrical equipment.

5. TITLE: OPERATE INLET WORKS

Specific outcome 5.1: Wear appropriate personal protective equipment in accordance

- Specific outcome 5.2: with legislation and work policies and procedures.
Remove and dispose of screenings in accordance with work policies and procedures.
- Specific outcome 5.3: Remove and dispose of grit from inlet works in accordance with work policies and procedures.
- Specific outcome 5.4: Record flow measurement in inlet works.
- Specific outcome 5.5: Record flow measurement in inlet works.
- Specific outcome 5.6: Comply with hygiene procedures when operating inlet works.
- Specific outcome 5.7: Complete designated tasks and reports in accordance with work policies and procedures.

6. TITLE: OPERATE SETTLING PROCESS

- Specific outcome 6.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 6.2: Remove and dispose of settled sludge and scum in accordance with work policies and procedures.
- Specific outcome 6.3: Monitor the settling process in accordance with work policies and procedures.
- Specific outcome 6.4: Complete routine maintenance of settling unit in accordance with work policies and procedures.
- Specific outcome 6.5: Comply with hygiene procedures when operating settling process.
- Specific outcome 6.6: Complete designated tasks and reports in accordance with work policies and procedures.

7. TITLE: DEMONSTRATE DOSING OF CHLORINE PRODUCTS IN A WASTEWATER WORKS

- Specific outcome 7.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 7.2: Demonstrate knowledge of different types of chlorine.
- Specific outcome 7.3: Comply with safety legislation when handling and storing chlorine.
- Specific outcome 7.4: Operate chlorine dosing equipment in accordance with work policies and procedures.
- Specific outcome 7.5: Measure the effectiveness of chlorine dosing in accordance with work policies and procedures.
- Specific outcome 7.6: Maintain chlorine dosing equipment.

8. TITLE: HANDLE AND DISPOSE OF SLUDGE

- Specific outcome 8.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 8.2: Explain health and environmental risks when handling and disposing of sludge.
- Specific outcome 8.3: Explain disposal options for sludge.
- Specific outcome 8.4: Dispose of sludge in accordance with work policies and procedures.

Specific outcome 8.5: Comply with works hygiene procedures when disposing of sludge.

Specific outcome 8.6: Complete designated tasks and reports in accordance with work policies and procedures.

9. TITLE: DEMONSTRATE CHEMICAL AND BACTERIOLOGICAL SAMPLING TECHNIQUES AND FIELD TESTS

Specific outcome 9.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.

Specific outcome 9.2: Prepare sample bottles and sampling equipment in accordance with work policies and procedures.

Specific outcome 9.3: Take chemical samples in accordance with standard methods.

Specific outcome 9.4: Take bacteriological samples in accordance with standard methods.

Specific outcome 9.5: Carry out field tests.

Specific outcome 9.6: Explain the collection of samples from auto-samplers.

Specific outcome 9.7: Hand over of samples to responsible person in accordance with work policies and procedures.

10. TITLE: OPERATE A BIOFILTER.

Specific outcome 10.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.

Specific outcome 10.2: Operate biofilter in accordance with work policies and procedures.

Specific outcome 10.3: Complete maintenance of biofilter in accordance with work procedures.

Specific outcome 10.4: Inspect biofilter effluent for quality.

Specific outcome 10.5: Comply with works hygiene procedures when operating a biofilter.

Specific outcome 10.6: Complete designated tasks and reports in accordance with work policies and procedures.

11. TITLE: OPERATE AEROBIC DIGESTER

Specific outcome 11.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.

Specific outcome 11.2: Operate pumps in accordance with work policies and procedures.

Specific outcome 11.3: Operate aerators in accordance with work procedures and legislation.

Specific outcome 11.4: Maintain aerobic digester in accordance with work policies and procedures.

Specific outcome 11.5: Monitor aerobic digester.

Specific outcome: Comply with works hygiene procedures when operating aerobic

- 11.6: digester.
Specific outcome Complete designated tasks and reports in accordance with work
11.7: policies and procedures.

12. TITLE: OPERATE ROTATING BIODISC CONTACTOR (RBC)

- Specific outcome Wear appropriate personal protective equipment in accordance
12.1: with legislation and work policies and procedures.
Specific outcome Operate RBC in accordance with work policies and procedures.
12.2:
Specific outcome Complete maintenance of filter in accordance with work
12.3: procedures.

Specific outcome Inspect RBC effluent for quality.
12.4:
Specific outcome Comply with works hygiene procedures when operating an RBC.
12.5:
Specific outcome Complete designated tasks and reports in accordance with work
12.6: policies and procedures.

13. TITLE: CONTROL COMPOSTING PROCESS

- Specific outcome Wear appropriate personal protective equipment in accordance
13.1: with legislation and work policies and procedures.
Specific outcome Dewater sludge in accordance with work policies and procedures.
13.2:
Specific outcome Sample compost in accordance with work policies and procedures.
13.3:
Specific outcome Screen and cure compost.
13.4:
Specific outcome Monitor composting process in accordance with work policies and
13.5: procedure.
Specific outcome Maintain and operate equipment at compost site accordance with
13.6: work policies and procedures

Specific outcome Comply with works hygiene procedures at composting plant.
13.7:
Specific outcome Complete designated tasks and reports in accordance with work
13.8: policies and procedures.

14. TITLE: OPERATE TERTIARY FILTRATION PROCESS

- Specific outcome Wear appropriate personal protective equipment in accordance
14.1: with legislation and work policies and procedures.
Specific outcome Demonstrate knowledge of the purpose of tertiary filtration.
14.2:
Specific outcome Operate filter in accordance with work policies and procedures.
14.3:
Specific outcome Report on the status of the filter in accordance with work policies
14.4: and procedures.
Specific outcome Comply with works hygiene procedures when operating filtration
14.5: process.

Specific outcome 14.6: Complete designated tasks and reports in accordance with work policies and procedures.

15. TITLE: OPERATE CHEMICAL DOSING UNIT

Specific outcome 15.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.

Specific outcome 15.2: Demonstrate knowledge of relevant chemicals.

Specific outcome 15.3: Operate chemical dosing unit in accordance with work policies and procedures.

Specific outcome 15.4: Monitor chemical dosage in accordance with work policies and procedures.

Specific outcome 15.5: Demonstrate emergency procedures when operating chemical dosing unit.

Specific outcome 15.6: Comply with works hygiene procedures when operating filtration process.

Specific outcome 15.7: Complete designated tasks and reports in accordance with work policies and procedures.

16. TITLE: DEMONSTRATE KNOWLEDGE OF BIOLOGICAL PROCESSES

Specific outcome 16.1: Explain biochemical reactions.

Specific outcome 16.2: Explain aerobic processes.

Specific outcome 16.3: Explain anaerobic processes.

Specific outcome 16.4: Explain attached growth processes.

Specific outcome 16.5: Explain suspended growth processes.

UNIT STANDARDS AT NQF LEVEL 4

1. TITLE: THICKEN AND DEWATER SLUDGE

Specific outcome 1.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.

Specific outcome 1.2: Operate sludge thickeners in accordance with work policies and procedures.

Specific outcome 1.3: Operate sludge dewatering process in accordance with work policies and procedures.

Specific outcome 1.4: Maintain sludge thickener and dewatering equipment in accordance with work procedures.

Specific outcome 1.5: Comply with works hygiene procedures when thickening and dewatering sludge.

Specific outcome 1.6: Complete designated tasks and reports in accordance with work

policies and procedures.

2. TITLE: OPERATE ACTIVATED SLUDGE PROCESS

- Specific outcome 2.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 2.2: Operate the activated sludge process in accordance with work policies and procedures.
- Specific outcome 2.3: Monitor and sample the activated sludge process.
- Specific outcome 2.4: Interpret results.
- Specific outcome 2.5: Maintain equipment.
- Specific outcome 2.6: Comply with works hygiene procedures when operating activated sludge process.
- Specific outcome 2.7: Complete designated tasks and reports in accordance with work policies and procedures.

3. TITLE: OPERATE ANAEROBIC DIGESTER

- Specific outcome 3.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 3.2: Operate sludge pump in accordance with work policies and procedures.
- Specific outcome 3.3: Operate anaerobic digester in accordance with works procedures and legislation.
- Specific outcome 3.4: Monitor anaerobic digester.
- Specific outcome 3.5: Maintain anaerobic digester in accordance with work policies and procedures.
- Specific outcome 3.6: Comply with works hygiene procedures when operating anaerobic digester.
- Specific outcome 3.7: Complete designated tasks and reports in accordance with work policies and procedures.

No. 816

14 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**National Certificate in Wastewater Process Control NQF 4**

Field: Physical Planning and Construction - NSB 12
Sub-field: Civil Engineering Construction
Level: 4
Credit: 145
Issue date:
Review date:

Rationale of the qualification

This qualification reflects the workplace-based needs of wastewater process operators working in the water sector that is expressed by employers and employees, both now and for the future. This qualification provides the learner with a career path and progression within the water sector. The qualification also provides the flexibility to pursue different careers within wastewater. The level of flexibility within the range of electives will allow the individual to follow a career at a range of wastewater operations.

Purpose of the qualification

A person acquiring this qualification will be able to operate and coordinate a wastewater treatment works within the context of legislation and work policies and procedures. This qualification forms the foundation for advancement to higher level qualifications. This qualification focuses on the full development of the learner and further mobility and transportability within the water sector. This qualification will enhance productivity within the water sector and contribute towards the ecological sustainability and improvement of the water environment. The individual will have the capacity to advance and gain skills and self-respect.

Access to the Qualification

Open access.

Learning assumed to be in place

A knowledge, comprehension and application of language and mathematics at NQF level 3. The achievement of the following unit standards from the level 2 certificate in wastewater process operation: Knowledge of the Water Cycle, Knowledge of the Purpose of a Wastewater Treatment Works, Knowledge of Personal Safety Practices on a Wastewater Treatment Works, Operate Inlet Works, Operate Settling Process, Handling and Disposal of Sludge Dosing of Chlorine Products and Chemical and Bacteriological Sampling.

Exit level Outcomes**Qualifying learners can:****Exit level 1: Demonstrate an understanding and application of relevant legislation.****Associated Assessment Criteria**

- Knowledge and comprehension regarding personal safety practices in a wastewater environment is applied according to standard operating procedures and safety requirements.
- Knowledge and comprehension of the National Water Act.
- Demonstrate knowledge of occupational health & safety.
- Personal health, hygiene and presentation in a wastewater environment is maintained according to the Occupational Health and Safety Act,
- Good housekeeping is maintained on a wastewater treatment works in accordance with legislation and work policies and procedures

Exit level 2: Operate a minimum of four unit processes at a wastewater treatment works.**Associated Assessment Criteria**

- Operate activated sludge process at a wastewater works.
- Operate an anaerobic digester at a wastewater works.
- Operate a biofilter at a wastewater treatment works.
- Operate an additional unit process from the range of electives.
- Apply learning skills and knowledge in their personal, workplace and educational lives.
- Work with others in both learning and work-oriented situations.

Exit level 3: Demonstrate an understanding and knowledge of equipment of four unit processes.**Associated Assessment Criteria**

- Demonstrate an understanding and knowledge of the equipment used in the activated sludge process at a wastewater works.
- Demonstrate an understanding and knowledge of the equipment used in an anaerobic digester at a wastewater works.
- Demonstrate an understanding and knowledge of the equipment used in a biofilter at a wastewater works
- Demonstrate an understanding and knowledge of the equipment used for an additional unit process from the range of electives.
- Apply skills relevant to a wastewater context appropriately.

Exit level 4: Demonstrate communication and supervisory skills.**Associated Assessment Criteria**

- Interaction with work colleagues and management on a wastewater works.
- Daily supervision of staff within own scope of responsibility.
- Supervision of staff to achieve work objectives.
- Ability to handle conflict within own scope of responsibility on a wastewater treatment works.
- Use technology appropriately to achieve communicative objectives.

Exit level 5: Demonstrate administrative skills required on a wastewater treatment works

- Apply skills relevant to a wastewater context appropriately.
- Demonstrate administrative skills required on a wastewater treatment works.

- Demonstrate ability to prioritise administrative tasks to facilitate an efficient flow of documentation.

Associated Assessment Criteria

International comparability

The core and elective components have been developed taking into account South Africa's unique context, but also looking at international best practice. Benchmarking was done against the SVQ from Scotland (Monitoring the Water environment: level 2, Operating process Plant: Wastewater level 2, Water Industry Operations: Sewerage Maintenance level 2, Controlling Water Operations: Process level 3) as well as Australian qualification (Certificate course in Water and Wastewater). The fundamental components, reflecting foundational learning and generic skills and knowledge have been derived from registered, local adult education unit standards.

Integrated Assessment

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Integrated assessment must judge the quality of the observable performance, and also the quality of the thinking that lies behind it. Assessment tools must encourage learners to give an account of the thinking and decision-making that underpin their demonstrated performance. Some assessment practices will demand practical evidence while others may be more theoretical, depending on the type of outcomes to be assessed, and the nature and level of the qualification. The ratio between action and interpretation is not fixed, but varies according to the demands of the qualification.

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A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place. Unit standards in the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflexive competencies.

Recognition of prior learning

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to be directly assessed may arrange to do so, without attending further training or education. The assessor and learner will decide together on the most appropriate assessment route to be taken.

Articulation possibilities

This qualification will allow a person to articulate to certificates or diplomas on level 5 or 6.

Criteria for registration of assessors

For an applicant to register as an assessor, the applicant needs:

- A minimum of two years practical, relevant occupational experience.
- Declared competent in all the outcomes of the of the generic assessor standard, and certificated by the ETDP SETA or by the relevant ETQA in agreement with the ETDP SETA in this regard.
- Detailed documentary proof of educational qualification, practical training undergone, and experience gained by the applicant must be provided (Portfolio of evidence).
- Able to demonstrate competence in relation to these specified standards and qualifications, at or above, the level of the qualifications in question.
- Meet any other additional requirements laid down by their constituent ETQA.

The subject matter experience of the assessor can be established by recognition of prior learning. The status of registered assessors can be checked on the appropriate ETQA database or website.

Moderation

1. Anyone assessing a learner against these standards must be registered as an assessor with the relevant ETQA.
2. Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA.
3. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against this qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

National Certificate in Wastewater Process Control NQF 4 145credits

FUNDAMENTAL Total 56 credits	L	C	CORE Total 74 credits	L	C	ELECTIVE Select a minimum of 15 credits	L	C
Use mathematics to investigate and monitor the financial aspects of personal, business, and national issues (7468)	4	6	Operate Activated Sludge Process	4	18	Operate Aerobic Digesters	2	5
Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems (9015)	4	6	Demonstrate Knowledge of Wastewater Related Legislation	4	8	Operate Rotating Biodisc Contactor	2	4
Measure, estimate and calculate physical quantities and explore, critique and prove geometrical relationships in two and three-dimensional space in the life and workplace of the adult with increasing responsibilities (9016)	4	4	Demonstrate Knowledge and Operation of Mechanical and Electrical Systems	4	5	Operate Telemetric and Electronic Equipment and Scientific Instrumentation	4	12
Use language and communication in occupational learning programmes (8967)	4	5	Demonstrate Knowledge of The Principles Of Hydraulics	4	6	Take Investigative Samples For Monitoring Process	4	8
Read analyse and respond to a variety of texts (8975)	4	5	Operate An Anaerobic Digester	4	7	Control Maturation and Oxidation Ponds	4	3
Write for a wide range of contexts (8976)	4	5	Operate a Biofilter	2	5	Demonstrate Knowledge of Advanced Treatment of Waste Water Process	4	20
Interact orally and in writing in the workplace (8556)	4	5	Supervise Personal Safety Practices on A Wastewater Treatment Works	4	4	Operate a Rapid Gravity Filtration Process	4	16
Second language	3	20	Execute General Office Administration (8015)	2	4	Demonstrate Knowledge of and Produce Word Processing Documents using Basic Functions (7568)	2	3
			Supervise Work Unit To Achieve Work Unit Objectives (individuals and teams) (10981)	4	12			
			Produce Word Processing Documents for Business (7570)	3	5			
Total credits on level 4		30	Total credits on level 4		60			
Total credits		56	Total credits		74	Total credits		15

National Certificate in Wastewater Process Control NQF 4**UNIT STANDARDS ON NQF LEVEL 2**

- Title 1: Operate a Biofilter
- Title 2: Operate Aerobic digesters
- Title 2: Operate Rotating Biodisc Contactor

UNIT STANDARDS ON NQF LEVEL 4

- Title 1: Operate Activated Sludge Process
- Title 2: Demonstrate Knowledge of Wastewater Related Legislation
- Title 3: Demonstrate Knowledge and Operation of Mechanical and Electrical Systems
- Title 4: Demonstrate Knowledge of the Principles of Hydraulics
- Title 5: Operate An Anaerobic Digester
- Title 6: Supervise Personal Safety practices on a Wastewater Treatment Works
- Title 7: Operate Telemetric and Electronic Equipment and Scientific Instrumentation.
- Title 8: Take Investigative Samples for Monitoring Process
- Title 9: Control Maturation and Oxidation Ponds
- Title 10: Demonstrate Knowledge of Advanced Treatment of Wastewater Process
- Title 11: Operate A Rapid Gravity Filtration Process

**Unit Standards And Specific Outcomes For The National Certificate In
Wastewater Process Control NQF 4**

UNIT STANDARDS AT NQF LEVEL 2**1. TITLE: OPERATE A BIOFILTER.**

- Specific outcome 1.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 1.2: Operate biofilter in accordance with work policies and procedures.
- Specific outcome 1.3: Complete maintenance of biofilter in accordance with work procedures.
- Specific outcome 1.4: Inspect biofilter effluent for quality.
- Specific outcome 1.5: Comply with works hygiene procedures when operating a biofilter.
- Specific outcome 1.6: Complete designated tasks and reports in accordance with work policies and procedures.

2. TITLE: OPERATE AN AEROBIC DIGESTER

- Specific outcome 2.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 2.2: Operate pumps in accordance with work policies and procedures.
- Specific outcome 2.3: Operate aerators in accordance with work procedures and legislation.
- Specific outcome 2.4: Maintain aerobic digester in accordance with work policies and procedures.
- Specific outcome 2.5: Monitor aerobic digester.
- Specific outcome 2.6: Comply with works hygiene procedures when operating aerobic digester.
- Specific outcome 2.7: Complete designated tasks and reports in accordance with work policies and procedures.

3. TITLE: OPERATE ROTATING BIODISC CONTACTOR (RBC)

- Specific outcome 3.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 3.2: Operate RBC in accordance with work policies and procedures.
- Specific outcome 3.3: Complete maintenance of filter in accordance with work procedures.
- Specific outcome 3.4: Inspect RBC effluent for quality.
- Specific outcome 3.5: Comply with works hygiene procedures when operating an RBC.
- Specific outcome 3.6: Complete designated tasks and reports in accordance with work policies and procedures.

UNIT STANDARDS AT NQF LEVEL 4**1. TITLE: OPERATE ACTIVATED SLUDGE PROCESS**

- Specific outcome 1.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 1.2: Operate the activated sludge process in accordance with work policies and procedures.
- Specific outcome 1.3: Monitor and sample the activated sludge process.
- Specific outcome 1.4: Interpret results.
- Specific outcome 1.5: Maintain equipment.
- Specific outcome 1.6: Comply with works hygiene procedures when operating activated sludge process.
- Specific outcome 1.7: Complete designated tasks and reports in accordance with work policies and procedures.

2. TITLE: DEMONSTRATE KNOWLEDGE OF WASTEWATER RELATED LEGISLATION

- Specific outcome 2.1: Explain discharge requirements in accordance with relevant legislation.
- Specific outcome 2.2: Explain disposal options for treated wastewater.
- Specific outcome 2.3: Explain typical wastewater flows and characteristics.
- Specific outcome 2.4: Explain disposal options of sludge.

3. TITLE: DEMONSTRATE KNOWLEDGE AND OPERATION OF MECHANICAL AND ELECTRICAL SYSTEMS

- Specific outcome 3.1: Explain basic mechanical principles.
- Specific outcome 3.2: Demonstrate the operation of mechanical equipment at own works.
- Specific outcome 3.3: Explain maintenance of mechanical equipment.
- Specific outcome 3.4: Explain principles of electricity.
- Specific outcome 3.5: Demonstrate practices and procedures for managing equipment fires.

4. TITLE: DEMONSTRATE KNOWLEDGE OF THE PRINCIPLES OF HYDRAULICS

- Specific outcome 4.1: Explain the principles of hydraulics.
- Specific outcome 4.2: Explain the principles of hydraulics.
- Specific outcome 4.3: Explain flow characteristics in pressurised lines.
- Specific outcome 4.4: Explain flow measuring devices.

5. TITLE: OPERATE AN ANAEROBIC DIGESTER

- Specific outcome 5.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 5.2: Operate sludge pump in accordance with work policies and procedures.
- Specific outcome 5.3: Operate anaerobic digester in accordance with works procedures and legislation.
- Specific outcome 5.4: Monitor anaerobic digester.
- Specific outcome 5.5: Maintain anaerobic digester in accordance with work policies and procedures.
- Specific outcome 5.6: Comply with works hygiene procedures when operating anaerobic digester.
- Specific outcome 5.7: Complete designated tasks and reports in accordance with work policies and procedures.

6. TITLE: SUPERVISE PERSONAL SAFETY PRACTICES ON A WASTEWATER TREATMENT WORKS

- Specific outcome 6.1: Demonstrate knowledge of relevant sections of the Occupational Health and Safety Act and the Compensation for Occupational Injuries and Diseases Act.
- Specific outcome 6.2: Demonstrate knowledge of the purpose of a health and safety representative.
- Specific outcome 6.3: Explain safe working practices on a wastewater treatment works in accordance with work policies and procedures.
- Specific outcome 6.4: Supervise emergency procedures.
- Specific outcome 6.5: Monitor good housekeeping practices on a wastewater treatment works.
- Specific outcome 6.6: Explain the dangers of working with moving machinery.
- Specific outcome 6.7: Explain procedures for entering a confined space.

7. TITLE: OPERATE TELEMETRIC AND ELECTRONIC EQUIPMENT AND SCIENTIFIC INSTRUMENTATION.

- Specific outcome 7.1: Plan and prioritise work.
- Specific outcome 7.2: Interpret readings from telemetric and electronic equipment and scientific instrumentation.
- Specific outcome 7.3: Report irregular readings in accordance with works policies and procedures.
- Specific outcome 7.4: Maintain telemetric and electronic equipment and scientific instrumentation in accordance with work policies and procedures.
- Specific outcome 7.5: Record, analyse and interpret information from data loggers.

8. TITLE: TAKE INVESTIGATIVE SAMPLES FOR MONITORING PROCESS

- Specific outcome 8.1: Wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 8.2: Plan investigative samples and collect sampling and measuring equipment according to schedule and priorities.
- Specific outcome 8.3: Indicate and locate sample positions on process diagram.
- Specific outcome 8.4: Take samples for process monitoring in accordance with instructions.
- Specific outcome 8.5: Take ad hoc samples.
- Specific outcome 8.6: Record samples taken in accordance with work policies and procedures.
- Specific outcome 8.7: Maintain sampling and measuring equipment in accordance with work policies and procedures.
- Specific outcome 8.8: Interpret results received from laboratory in accordance with work policies and procedures.

9. TITLE: CONTROL MATURATION AND OXIDATION PONDS

- Specific outcome 9.1: Staff wear appropriate personal protective equipment in accordance with legislation and work policies and procedures.
- Specific outcome 9.2: Monitor the operation of anaerobic ponds.
- Specific outcome 9.3: Monitor the operation of aerobic ponds.
- Specific outcome 9.4: Monitor the maintenance of the maturation and oxidation ponds.
- Specific outcome 9.5: Ensure that the ponds are operated in accordance with legislation.
- Specific outcome 9.6: Manage the completion of designated tasks.

10. TITLE: DEMONSTRATE KNOWLEDGE OF ADVANCED TREATMENT OF WASTEWATER PROCESS

- Specific outcome 10.1: Demonstrate knowledge of biological nutrient removal.
- Specific outcome 10.2: Demonstrate knowledge of dosing to induce coagulation and flocculation.
- Specific outcome 10.3: Demonstrate knowledge of tertiary treatment.
- Specific outcome 10.4: Demonstrate knowledge of advanced sludge treatment.
- Specific outcome 10.5: Demonstrate knowledge of the different types of package plants.

11. TITLE: OPERATE A RAPID GRAVITY FILTRATION PROCESS

- Specific outcome 11.1: Identify and demonstrate knowledge of various types of rapid gravity filters.
- Specific outcome 11.2: Evaluate and determine the necessity of back-washing a rapid gravity filter.
- Specific outcome 11.3: Operate a rapid gravity filter.
- Specific outcome 11.4: Maintain filter media.
- Specific outcome 11.5: Maintain rapid gravity filter.
- Specific outcome 11.6: Demonstrate disposal and/or recovery of backwash water.

No. 817

14 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In order to proceed with the recognition of Standards Generating Bodies in terms of Government Regulations 19(1)(c) and 22(2) of 28 March 1998, National Standards Body 11, Services invites public comment with respect to *the acceptability of the nominees and the representativeness of the key education and training stakeholder interest groups* listed as an SGB applicant below.

In addition, the NSB invite submissions from interested parties wishing to serve on such an SGB. Interested parties should take note of the section on SGB Information below.

All nominations/ applications should be accompanied by curricula vitae.

More information regarding this application may be obtained on the SAQA website or from the SAQA offices.

Comment should reach the NSB at the address below **by not later than 7 July 2002**. All correspondence should be marked **SGB Formation – NSB 11, Hospitality, Tourism, Travel, Leisure and Gaming** and be addressed to:

The Director: Standards Setting and
Development
SAQA
Attention: Mr. D Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 - 482 0992

SGB INFORMATION

As a necessary step in the development and implementation of the National Qualifications Framework, The National Standards Bodies are briefed [regulation 19(1)(c) of 28 March 1998] to recognise or establish Standards Generating Bodies (SGBs).

SGBs shall:

- a. generate standards and qualifications in accordance with the Authority requirements in identified sub-fields and levels;
- b. update and review standards;
- c. recommend standards and qualifications to National Standards Bodies;
- d. recommend criteria for the registration of assessors and moderators or moderating bodies; and
- e. perform such other functions as may from time-to-time be delegated by their National Standards Body.

Any bodies wishing to nominate representatives, make application to serve on, or make any other submission with regard to the above SGB should note the following information.

SGBs should be composed of organisations, which shall be key education and training stakeholder interest groups and experts in the sub-field. The NSB, when making its final decisions will have due regard for, among other things, *'the need for representativeness and equity, redress and relevant expertise in terms of the work of the SGBs.'*

Organisations proposing to nominate persons to SGBs should be sensitive to the need for **equity** and **redress**, and shall nominate persons who-

- (a) will be able to consider issues of productivity, fairness, public interest and international comparability as related to education and training in the sub-field;
- (b) enjoy credibility in the sub-field in question, who enjoy respect; have the necessary expertise and experience in the sub-field and have the support or backing of the nominating body;
- (c) are able to advocate and mediate the needs and interests of all levels within the sub-field covered by the Standards Generating Body;
- (d) are able to exercise critical judgement at a high level; and
- (e) are committed to a communication process between the Standards Generating Body, the National Standards Body and the Constituency.

**PUBLIC NOTICE BY NSB 11, SERVICES, APPLICATION TO RE-REGISTER AN SGB FOR
HOSPITALITY, TOURISM, TRAVEL, LEISURE AND GAMING**

NSB 11 has decided, in terms of NSB *Regulation 24 (1) (e)*, to extend the brief and membership of the SGB for Hospitality, Tourism, Travel, Leisure and Gaming for NQF levels 1 – 8.

PROPOSED BRIEF OF THE SGB

1. Develop learning pathways for potential qualifications and unit standards in the area of Hospitality, Tourism, Travel, Leisure and Gaming from level 1 through to level 8 [*Regulation 24 (1) (e)*].
2. The following qualifications shall be generated:
 - General Education and Training Certificate: Tourism (Level 1)
 - National Diploma in Hospitality Operations (level 5)
 - National Certificate in Hotel/Hospitality Management (Level 4)
 - National Diploma in Hotel/Hospitality Management (Level 5)
 - First Degree in Hotel/Hospitality Management (Level 6)
 - National Certificate in Game Lodge Management (Level 5)
 - National Certificate in Bush Catering (Level 4)
 - Unit Standards for South African Ethnic Cookery (Levels 2 – 5)
 [*Regulation 24 (1) (a)*]
3. Recommend the qualifications and standards generated under 1 and 2 above, to the NSB [*Regulation 24 (1) (c)*].
4. Recommend criteria for the registration of assessors and moderators or moderating bodies [*Regulation 24 (1) (d)*].
5. Liase with any other SGBs, as required, where Tourism is involved or being considered [*Regulation 24 (1) (e)*].
6. Accept and perform other related functions as requested by NSB 11, Services [*Regulation 24 (1) (e)*].

PROPOSED COMPOSITION OF THE SGB

NAME	WORKPLACE	NOMINATING BODY	QUALIFICATION/ EXPERIENCE
Donavon Goliath	Training and Organisational Development Consultant	African Equations	BA; B Ed.
Calvyn Gilfellan	Mpumalanga Provincial Government	Mpumalanga Provincial Government	BA; BA Hon; MA
Nicky Anderson	Nando's	Nando's	National Diploma in Hotel Management
Ike Shirindi	Phumelela Gaming and Leisure	Phumelela Gaming and Leisure	BA Degree
Beverley Muller	BM Training Consultant	Southern Sun	Diploma in Hotel Management.

M T Klassen	Hospitality Development and Education Gauteng	Hospitality Development and Education Gauteng	Diploma in Business Management, Diploma in Financial Management.
Johannes Kaledi	Tswelopele Hospitality Academy	Tswelopele Hospitality Academy	Business Management Diploma
Petra Courtney	Fastraq Training and Development	Maloti Tourism Information Office	BA; BA Hon; HOD; Trainer development Diploma
Henrietta Dawson	Retired	Association of Further Education and Training Institutions of SA	Further Diploma in Education (Commerce)
Isabel Steyn	Roodepoort College	Roodepoort College	BA (THED)
Annalee Howell	Pinetown College	Association of Further Education and Training Institutions of SA	BA (English & Psychology)
Frank Tanner	M L Sultan Technikon	M L Sultan Technikon	B Com Hon; Certificate of Higher Education Practice
Ronell Germishuys	Technical College of South Africa	Technical College of South Africa	BA (THED)
Rita de Swardt	International Transport and Training Technologies (ITTT)	Development & Training Strategies	IATA Management Certificate, Diploma in Training and Development
Antonette McClean	Ceasars Gauteng	Global Resorts	B Com: Industrial Psychology; B Com: Training Management
Steven Quinn	Sun International	Sun International	Diploma in Training Development
Lisa Gordon-Davis	Theta	Theta	BA Honours: Human Resources Development
Gerrie du Rand	University of Pretoria	University of Pretoria	M Sc: Home Economics
Carol-Anne Cairns	Skills Development Solutions	ASATA and BARSA	Member of UFTAA, Member of Technisa Academic Board.
Ntwana Mohlamonyane	South African Airways	South African Airways	B. Com Ed; B. Ed; B. Tech: Business Administration

No. 818

14 June 2002

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In order to proceed with the recognition of Standards Generating Bodies in terms of Government Regulations 19(1)(c) and 22(2) of 28 March 1998, National Standards Body 11, Services invites public comment with respect to *the acceptability of the nominees and the representativeness of the key education and training stakeholder interest groups* listed as an SGB applicant below.

In addition, the NSB invite submissions from interested parties wishing to serve on such an SGB. Interested parties should take note of the section on SGB Information below.

All nominations/ applications should be accompanied by curricula vitae.

More information regarding this application may be obtained on the SAQA website or from the SAQA offices.

Comment should reach the NSB at the address below **by not later than 7 July 2002**. All correspondence should be marked **SGB Formation – NSB 11, Transport and Logistics Operations** and be addressed to:

The Director: Standards Setting and
Development
SAQA
Attention: Mr. D Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 - 482 0992

SGB INFORMATION

As a necessary step in the development and implementation of the National Qualifications Framework, The National Standards Bodies are briefed [regulation 19(1)(c) of 28 March 1998] to recognise or establish Standards Generating Bodies (SGBs).

SGBs shall:

- a. generate standards and qualifications in accordance with the Authority requirements in identified sub-fields and levels;
- b. update and review standards;
- c. recommend standards and qualifications to National Standards Bodies;
- d. recommend criteria for the registration of assessors and moderators or moderating bodies; and
- e. perform such other functions as may from time-to-time be delegated by their National Standards Body.

Any bodies wishing to nominate representatives, make application to serve on, or make any other submission with regard to the above SGB should note the following information.

SGBs should be composed of organisations, which shall be key education and training stakeholder interest groups and experts in the sub-field. The NSB, when making its final decisions will have due regard for, among other things, *'the need for representativeness and equity, redress and relevant expertise in terms of the work of the SGBs.'*

Organisations proposing to nominate persons to SGBs should be sensitive to the need for **equity** and **redress**, and shall nominate persons who-

- (a) will be able to consider issues of productivity, fairness, public interest and international comparability as related to education and training in the sub-field;
- (b) enjoy credibility in the sub-field in question, who enjoy respect; have the necessary expertise and experience in the sub-field and have the support or backing of the nominating body;
- (c) are able to advocate and mediate the needs and interests of all levels within the sub-field covered by the Standards Generating Body;
- (d) are able to exercise critical judgement at a high level; and
- (e) are committed to a communication process between the Standards Generating Body, the National Standards Body and the Constituency.

**PUBLIC NOTICE BY NSB 11, SERVICES, TO RE-REGISTER AN SGB FOR
TRANSPORT AND LOGISTICS OPERATIONS**

NSB 11 has decided, in terms of NSB *Regulation 24 (1) (e)*, to extend the brief and membership of the SGB for Transport and Logistics Operations for NQF levels 1 – 8, and hereby registers the SGB.

BRIEF OF THE SGB

1. Develop learning pathways for potential qualifications and unit standards in the area of Transport and Logistics Operations from level 1 through to level 8 [*Regulation 24 (1) (e)*].
2. The following qualifications shall be generated:
 - National Certificate in Transport and Logistics Operations (Level 1)
 - National Certificate in Road Passenger Operations (Level 2)
 - National Certificates in Pipeline Operations (Levels 2 – 4)
 - National Certificate in Transport Management (Level 4)
 - National Diplomas in Transport Management (Levels 5 – 7)
 - National Certificate in Rail Operations (Level 4)
 - National Certificates in Train Driving (Levels 3 – 4)
 - National Certificates in Rail Maintenance (Level 3 - 7)
 - National Certificates in Ship's Agency (Level 4 - 6)
 - Certificate in Track Maintenance (level 2)
 - Certificate in Track Construction (level 2)
 - Certificate in Track Welding (level 3)
 - Certificate in Fitting (Points and Crossings) (level 4)
 - Certificate in Railway Signalling (level 4)
 - Diploma in Railway Signalling (level 6)
 - Certificate in Locomotive Maintenance (Electrical) (level 4)
 - Certificate in Locomotive Maintenance (Diesel) (level 4)
 - Certificate in Locomotive Maintenance (Mechanical) (level 4)
 - Certificate in Locomotive Refurbishment (level 4)
 - Certificate in Wagon Maintenance (level 4)
 - Certificate in Wagon Refurbishment (level 4)
 - Certificate in Coach Building (level 4)
 - Certificate in Coach Fitting (level 4)
 - Certificate in Coach Maintenance (level 4)
 - Unit Standards in Stevedoring as electives for the Certificate in Freight Handling
 - Unit Standards in Specialised Road Freight Operations as electives for the Certificate in Professional Driving.[*Regulation 24(1)(a)*].
3. Recommend the qualifications and standards generated under 1 and 2 above, to the NSB [*Regulation 24(1)(c)*].
4. Recommend criteria for the registration of assessors and moderators or moderating bodies [*Regulation 24(1)(d)*].

5. Liase with any other SGBs, as required, where Transport and Logistics Operations is involved or being considered [Regulation 24(1)(e)].
6. Accept and perform other related functions as requested by NSB 11, Services [Regulation 24(1)(e)].

COMPOSITION OF THE SGB

NAME	WORKPLACE	NOMINATING BODY	QUALIFICATION/ EXPERIENCE
Mr Abercrombie, J	Rennies Cargo Terminal	WDEA	MBA
Mr Bromilow, G	Afrox	Road Freight Chamber TETA	Certificate in Transport Management
Mr De Klerk, J H	South African Institute of Materials Handling	South African Institute of Materials Handling	National Diploma in Engineering
Col. H Fritz	Department of Defence	Department of Defence	Masters Degree: Industrial Psychology
Mr Grobler, J D	S.A. Bus Operators Association	Road Passenger Chamber, TETA	ETDP Diploma. National "N" Diploma- Electrical Engineering
Mr Jacklin, B	Spar Group SA	Spar Group SA	LLB
Mr Janse Van Rensburg, W J	SASOL	Chemical Industries Education and Training Authority	Training & Development Diploma
Mrs Joubert, J	Transnet	Transnet	B.A. Hons. (HRD)
Ms Kriel, M	Transnet	Transnet	HED (Post-Graduate)
Ms Momsen, E	He & She Driving School	He & She Driving School	HED (Post-Graduate)
Mr Pretorius, P C	Clover SA	Clover SA	BA Hons.
Ms Visser, K	Rand Afrikaans University	Rand Afrikaans University	B Com Honours (Transport Economics)
Ms Wessels, C	The Learning Clinic	The Learning Clinic	BA Hons.
Mr Wilson, G G	Transport & Omnibus Workers Union	Transport & Omnibus Workers Union	Diploma in Financial Economics
Mr Nhlapo, E	Plasser Railway Machinery (SA) (PTY) LTD	Plasser Railway Machinery (SA) (PTY) LTD	Diploma in Business Management. Diploma in Purchasing Management
Mr Vermeulen, A	Spoornet	Spoornet	(N3) Electrician ETD Certificate
Mr Gangiah, A G	Metrorail	Metrorail	M.A. (Counselling Psychology)
Ms Kgatla- Makgamatho, M	Rail Chamber, TETA	Rail Chamber, TETA	B.A Hons. (HRD)
Mr Maselesele, S	Plasser Railway Machinery (SA) (PTY) LTD	Plasser Railway Machinery (SA) (PTY) LTD	[Mechanical] N4. Higher Certificate in Business Administration and Management.
Mr de Villiers, K T	The Institute of Road Transport Engineers	The Institute of Road Transport Engineers	BSc Mech Eng. Hon Fellow of Soc of Ops Engineers.

Ms Theron, L	South African Breweries	South African Breweries	B Ed (Adult Education) B.A. (Urbanology)
Mr Cronje, J N	University of South Africa	University of S Africa	D Com (Commerce) Associate Professor in Transport Economics and Logistics
Mr Sithole G	Edcon Distributions	Distribution Logistics	Management Advancement Programme Diploma
Mr Cleophas PF	Golden Arrow Bus Service	Road Passenger Chamber	B Tech (HRD) Dip Transport Economics

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